Miller Mechanical Contractors and Engineers, LLC

Chemical List and Complete SDS

MARCH 2017

Chemical List

Tab Chemical Name/Manufacturer

- A. CAULK & SEALANTS
 - a. FS-ONE, HILTI
 - b. FIRE SEALANT, 3M
 - c. POLYSEAMSEAL SEALANT, LOCTITE
 - d. CLEAR SILICONE, DAP
 - e. WHITE CAULK, DAP
 - f. VULKEM SEALANT, TREMCO
- B. IPS, WELD-ON, SOLVENTS & CEMENTS
 - a. 717 LOW VOC CEMENT, WELD-ON
 - b. P-68 PRIMER, WELD-ON
 - c. CPVC GLUE, FLOW GUARD GOLD, WELD-ON
 - d. 729 CPVC GLUE, WELD-ON
 - e. 713 CPVC GLUE, WELD-ON
 - f. P-70 CLEAR PRIMER, WELD-ON
- C. OATEY SOLVENTS & CEMENTS
 - a. HD PVC CEMENT
 - b. REG. PVC CEMENT
 - c. PURPLE PRIMER
 - d. CPVC CEMENT, GOLD
 - e. HD ORANGE CEMENT
 - f. CLEAR PRIMER
 - g. PURPLE PRIMER W/ CLEANER
 - h. RAIN OR SHINE CEMENT
 - i. ALL PURPOSE CEMENT
- D. THREAD SEALANT, OILS, LUBRICANTS
 - a. WHITE SEAL PLUS PIPE COMPOUND, WELD-ON
 - b. NO. 5 SOLDER PASTE FLUX, OATEY
 - c. LEAK DETECTOR, OATEY
 - d. CLEAR CUTTING OIL, OATEY
 - e. DARK CUTTING OIL, OATEY
- E. SOLVENTS & CEMENTS
 - a. PVC PURPLE PRIMER, HERCULES
 - b. MULTI-PURPOSE MILKY MEDIUM CEMENT, HERCULES
- F. PUTTY, SOLDER, FLUX
 - a. 95/5 LEAD FREE SOLDER, OATEY
 - b. NO 5 LEAD FREE SOLDER PASTE, OATEY
 - c. FLUX
 - d. PLUMBERS PUTTY
- G. EQUIPMENT FUEL & SOLDERING GASES
 - a. GASOLINE
 - b. DIESEL

- c. LOW SULFER DIESELd. MAPP GASe. PROPANE

- f. ACETYLENE
- H. INSULATION
 - a. FIBERGLASSb. RUBBER TEX

Caulk & Sealants

Contents:

1. FS-ONE, HILTI 2. FIRE SEALANT, 3M 3. POLYSEAMSEAL SEALANT 4. CLEAR SILICONE, PROFLO 5. WHITE CAULK, PROFLO 6. VULKEM SEALANT



Version number 1

Page 1/5

1 Identification

· Product identifier

- · Trade name:
- FS-ONE MAX
- Hilti Firestop Filler Mastic CFS-FIL
- Relevant identified uses of the substance or mixture and uses advised against No further relevant information available.
- · Application of the substance / the mixture Construction chemicals
- · Details of the supplier of the safety data sheet · Manufacturer/Supplier: Hilti, Inc. 5400 South 122nd East Ave. US-Tulsa, OK 74146 Phone: (800) 879-8000 Fax: (800) 879-7000 Español: (800) 879-5000
- · Information department: chemicals.hse@hilti.com see section 16
- · Emergency telephone number: Chem-Trec Tel.: 1 800 424 9300 Tox Info Suisse - 24 h Service Tel.: 0041 / 44 251 51 51 (international)

2 Hazard(s) identification

· Classification of the substance or mixture The product is not classified according to the Globally Harmonized System (GHS).

- · Label elements
- · GHS label elements Void
- · Hazard pictograms Void
- · Signal word Void
- · Hazard statements Void
- · Classification system
- · NFPA ratings (scale 0-4)



Reactivity = 0

· Other hazards

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description:

Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

- 57-55-6 propane-1,2-diol
- Additional information For the wording of the listed risk phrases refer to section 16.

4 First-aid measures

- · Description of first aid measures
- · General information No special measures required.
- · After inhalation Take affected persons into fresh air and keep quiet.
- · After skin contact Immediately wash with water and soap and rinse thoroughly. · After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing Seek immediate medical advice.
- Information for doctor
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. (Contd. on page 2)

<2.5%



Safety Data Sheet acc. to ISO 11014 Version number 1

Reviewed on 05/18/2015

(Contd. of page 1)

Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Carbon monoxide (CO)

Carbondioxide (CO2)

· Advice for firefighters

· Protective equipment: Ensure adequate ventilation

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation Wear protective clothing.

Particular danger of slipping on leaked/spilled product.

- Environmental precautions: Do not allow product to reach sewage system or any water course.
- Methods and material for containment and cleaning up:

Pick up mechanically. Dispose contaminated material as waste according to item 13.

- **Reference to other sections**
- See Section 7 for information on safe handling
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

7 Handling and storage

- · Handling
- Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage
- Requirements to be met by storerooms and receptacles: keep containers securely closed and dry, store at 5 25 °C / 41 77 °F
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Storage class 10
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

· Control parameters

· Components with limit values that require monitoring at the workplace:

57-55-6 propane-1,2-diol

WEEL Long-term value: 10 mg/m3

· Additional information: The lists that were valid during the creation were used as basis.

- · Exposure controls
- · Personal protective equipment
- General protective and hygienic measures
- The usual precautionary measures for handling chemicals should be followed.
- Avoid contact with the eyes and skin.
- Keep away from foodstuffs, beverages and feed.
- Wash hands before breaks and at the end of work.
- · Breathing equipment: Not necessary if room is well-ventilated.
- Protection of hands:



Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

EN 374

Material of gloves

Synthetic gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· For the permanent contact gloves made of the following materials are suitable: Nitrile rubber, NBR

(Contd. on page 3)

US



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(Contd. of page 2)

· Eye protection:



Tightly sealed goggles.

EN 166 + EN 170 • **Body protection:**

Protective work clothing.

9 Physical and chemical properties

9 Physical and chemical properties			
Information on basic physical and c General Information Appearance:	hemical properties		
Form:	Pasty		
Color:	Red		
· Odor:	Characteristic		
· Odour threshold:	Not determined.		
· pH-value:	Not determined.		
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Not determined. 100 °C (212 °F)		
· Flash point:	Not applicable		
· Flammability (solid, gaseous)	Not applicable.		
· Ignition temperature:			
Decomposition temperature:	Not determined.		
· Auto igniting:	Product is not selfigniting.		
· Danger of explosion:	Product does not present an explosion hazard.		
· Explosion limits:			
Lower:	Not determined.		
Upper:	Not determined.		
· Vapor pressure at 20 °C (68 °F):	23 hPa (17 mm Hg)		
· Density:	Not determined		
· Relative density	Not determined.		
· Vapour density	Not determined.		
	Not applicable.		
· Evaporation rate	Not determined.		
 Solubility in / Miscibility with Water: 	Not miscible or difficult to mix		
· Partition coefficient (n-octanol/wate	er): Not determined.		
· Viscosity:			
dynamic:	Not determined.		
kinematic:	Not determined.		
· Solvent content:			
Organic solvents:	1.0 %		
Water:	18.5 %		
 Other information 	VOC Content: 9 g/l (EPA Method 24)		

10 Stability and reactivity

· Reactivity

· Chemical stability

· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· Possibility of hazardous reactions No dangerous reactions known

· Conditions to avoid No further relevant information available.

- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known

(Contd. on page 4)

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(Contd. of page 3)

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- · Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

 \cdot IARC (International Agency for Research on Cancer)

14808-60-7 Quartz (SiO2)

· NTP (National Toxicology Program)

14808-60-7 Quartz (SiO2)

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- \cdot Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- · European waste catalogue:
- 08 00 00
- 08 04 00
- 08 04 10

· Uncleaned packagings:

· Recommendation: Dispose of packaging according to regulations on the disposal of packagings.

UN-Number DOT, ADR, ADN, IMDG, IATA	Void	
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	Void	
Transport hazard class(es)		
DOT, ADR, ADN, IMDG, IATA Class	Void	
Packing group DOT, ADR, IMDG, IATA	Void	
Environmental hazards: Marine pollutant:	No	
Special precautions for user	Not applicable.	
Transport in bulk according to Annex II of MAE the IBC Code	POL73/78 and Not applicable.	
UN "Model Regulation":	-	

15 Regulatory information

 \cdot Safety, health and environmental regulations/legislation specific for the substance or mixture

· Sara

- Section 355 (Extremely hazardous substances):
- None of the ingredients is listed.

(Contd. on page 5)



Safety Data Sheet acc. to ISO 11014 Version number 1

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	(Contd. of page 4
Section 313 (Specific toxic chemical listings):	
None of the ingredients are listed.	
· TSCA (Toxic Substances Control Act):	
All ingredients are listed.	
· Proposition 65:	
Chemicals known to cause cancer:	
14808-60-7 Quartz (SiO2)	
· Cancerogenity categories	
· EPA (Environmental Protection Agency)	
None of the ingredients is listed.	
· TLV (Threshold Limit Value established by ACGIH)	
14808-60-7 Quartz (SiO2)	A
· MAK (German Maximum Workplace Concentration)	
14808-60-7 Quartz (SiO2)	
· NIOSH-Ca (National Institute for Occupational Safety and Health)	
14808-60-7 Quartz (SiO2)	
· Chemical safety assessment: not required.	

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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Tel.: +423 234 3004
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Date of preparation / last revision 05/18/2015 / Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
ELINCS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
* Data compared to the previous version altered.





Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3M FireBarrierTM Sealant IC 15 WB+

Product Identification Numbers

42-0016-4768-6, 42-0016-4769-4, 42-0016-4770-2, 98-0400-5509-1, 98-0400-5510-9, 98-0400-5511-7, 98-0400-5512-5, 98-0400-5630-5

1.2. Recommended use and restrictions on use

Recommended use Fire Barrier Sealant.

1.3. Supplier's details	
MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2B. Carcinogenicity: Category 1A.

2.2. Label elements Signal word Danger

Symbols Health Hazard |

Pictograms



Hazard Statements Causes eye irritation. May cause cancer.

Precautionary Statements General: Keep out of reach of children.

Prevention:

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wash thoroughly after handling.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention.

Storage:

Store locked up.

Disposal:

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified

None.

Ingredient	C.A.S. No.	% by Wt
Calcium Carbonate	1317-65-3	30 - 60 Trade Secret *
Water	7732-18-5	10 - 30 Trade Secret *
Polymer NJTS Reg. No. 04499600-7314	Trade Secret*	10 - 30 Trade Secret *
Sodium Silicate	1344-09-8	3 - 7 Trade Secret *
ZIinc Borate 2335	138265-88-0	3 - 7 Trade Secret *
Fiberglass	65997-17-3	0.5 - 1.5 Trade Secret *
Quartz Silica	14808-60-7	< 0.5 Trade Secret *

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

<u>Substance</u> Carbon monoxide Carbon dioxide <u>Condition</u> During Combustion During Combustion

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Do not breathe

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dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities

No special storage requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Calcium Carbonate	1317-65-3	OSHA	TWA(as total dust):15	
			mg/m3;TWA(respirable	
			fraction):5 mg/m3	
Quartz Silica	14808-60-7	OSHA	TWA	
			concentration(respirable):0.1	
			mg/m3(2.4 millions of	
			particles/cu. ft.);TWA:0.05	
			mg/m3	
Quartz Silica	14808-60-7	ACGIH	TWA(respirable	A2: Suspected human
			fraction):0.025 mg/m3	carcin.
Fiberglass	65997-17-3	Manufacturer	TWA(as dust):10 mg/m3	
		determined		

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

Gloves made from the following material(s) are recommended: Nitrile Rubber

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Solid
Specific Physical Form:	Paste
Odor, Color, Grade:	Light yellow viscous paste with a mild odor
Odor threshold	No Data Available
Melting point	No Data Available
Boiling Point	Not Applicable
Flash Point	Flash point > 93 °C (200 °F)
Evaporation rate	No Data Available
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	Not Applicable
Flammable Limits(UEL)	Not Applicable
Vapor Pressure	No Data Available
Vapor Density	No Data Available
Specific Gravity	1.4 [<i>Ref Std:</i> WATER=1]
Solubility in Water	Moderate
Solubility- non-water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Molecular weight	No Data Available
Volatile Organic Compounds	<=20 % weight [<i>Test Method:</i> tested per EPA method 24]
VOC Less H2O & Exempt Solvents	<=4 g/l [<i>Test Method:</i> tested per EPA method 24]

SECTION 10: Stability and reactivity

10.1. Reactivity

This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid None known.

10.5. Incompatible materials None known.

10.6. Hazardous decomposition products <u>Substance</u>

Condition

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Additional Health Effects:

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
SILICA, CRYS AIRRESP	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens
Generic: GLASS FILAMENTS	65997-17-3	Anticipated human carcinogen	National Toxicology Program Carcinogens
Quartz Silica	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
Calcium Carbonate	Dermal	Rat	LD50 > 2,000 mg/kg
Calcium Carbonate	Inhalation- Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Calcium Carbonate	Ingestion	Rat	LD50 6,450 mg/kg
Polymer NJTS Reg. No. 04499600-7314	Dermal		LD50 estimated to be > 5,000 mg/kg
Polymer NJTS Reg. No. 04499600-7314	Ingestion	Rat	LD50 > 2,000 mg/kg
Zlinc Borate 2335	Dermal	Rabbit	LD50 > 10,000 mg/kg
Zlinc Borate 2335	Ingestion	Rat	LD50 > 10,000 mg/kg

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Sodium Silicate	Dermal	Rabbit	LD50 > 4,640 mg/kg
Sodium Silicate	Ingestion	Rat	LD50 500 mg/kg
Fiberglass	Dermal		LD50 estimated to be > 5,000 mg/kg
Fiberglass	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Quartz Silica	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz Silica	Ingestion		LD50 estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Calcium Carbonate	Rabbit	No significant irritation
Polymer NJTS Reg. No. 04499600-7314	Rabbit	Minimal irritation
Sodium Silicate	Rabbit	Corrosive
Fiberglass	Professio	No significant irritation
	nal	
	judgeme	
	nt	
Quartz Silica	Professio	No significant irritation
	nal	
	judgeme	
	nt	

Serious Eye Damage/Irritation

Name	Species	Value
Calcium Carbonate	Rabbit	No significant irritation
Polymer NJTS Reg. No. 04499600-7314	Professio	Mild irritant
	nal	
	judgeme	
	nt	
Sodium Silicate	Rabbit	Corrosive
Fiberglass	Professio	No significant irritation
	nal	
	judgeme	
	nt	

Skin Sensitization

Name	Species	Value
Sodium Silicate	Mouse	Not sensitizing

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Sodium Silicate	In Vitro	Not mutagenic
Sodium Silicate	In vivo	Not mutagenic
Fiberglass	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz Silica	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz Silica	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Fiberglass	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Quartz Silica	Inhalation	Human	Carcinogenic

and	
animal	

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Calcium Carbonate	Ingestion	Not toxic to development	Rat	NOAEL 625 mg/kg/day	premating & during gestation
Sodium Silicate	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Mouse	NOAEL 200 mg/kg/day	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Calcium Carbonate	Inhalation	respiratory system	All data are negative	Rat	NOAEL 0.812 mg/l	90 minutes
Sodium Silicate	Inhalation	respiratory irritation	May cause respiratory irritation	official classifica tion	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Calcium Carbonate	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Sodium Silicate	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Dog	LOAEL 2,400 mg/kg/day	4 weeks
Sodium Silicate	Ingestion	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 804 mg/kg/day	3 months
Sodium Silicate	Ingestion	blood	All data are negative	Rat	NOAEL 804 mg/kg/day	3 months
Sodium Silicate	Ingestion	heart liver	All data are negative	Rat	NOAEL 1,259 mg/kg/day	8 weeks
Fiberglass	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL not available	occupational exposure
Quartz Silica	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Test Organism Water flea, Daphnia magna Green algae, Pseudokirchneriella subcapitata 72 hours Aquatic Toxicity - Chronic

Test Type 48 hours Aquatic Toxicity - Acute Result 27 mg/l 2.6 % weight

3M FireBarrierTM Sealant IC 15 WB+ 08/17/16

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
ZIinc Borate 2335 (ZINC COMPOUNDS)	138265-88-0	3 - 7

15.2. State Regulations

Contact 3M for more information.

California Proposition 65

<u>C.A.S. No.</u>	Classification
None	Carcinogen
75-07-0	Carcinogen
None	Carcinogen
	None 75-07-0

WARNING: This product contains a chemical known to the State of California to cause cancer.

15.3. Chemical Inventories

3M FireBarrierTM Sealant IC 15 WB+ 08/17/16

The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the new substance notification requirements of CEPA.

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the chemical notification requirements of TSCA.

This product complies with the New Zealand Hazardous Substances and New Organisms Act (1996).

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 1 Flammability: 1 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Document Group:	19-9776-6	Version Number:	8.02
Issue Date:	08/17/16	Supercedes Date:	02/17/16

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3M USA SDSs are available at www.3M.com



Safety Data Sheet



Revision Number: 002.0

1. PRODUCT AND COMPANY IDENTIFICATION

IDH number:

Product name:

Product type: Sealant Restriction of Use: Company address: Henkel AG & Co. KGaA Henkelstr. 67 Düsseldorf 40589

Loctite Polyseamseal All Purpose Adhesive Caulk None identified

Region: Contact information:

United States Telephone: +49 (211) 797 0

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2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW WARNING: ABRASION COULD RELEASE RESPIRABLE PARTICLES OF SILICA QUARTZ, A CANCER HAZARD BY INHALATION. NORMAL USE OF THIS PRODUCT CAUSES NO SUCH RELEASE. CAUSES SERIOUS EYE IRRITATION.

HAZARD CLASS		HAZARD CATEGORY
EYE IRRITATION		2A
	PICTOGRAM(S)	

Precautionary Statements

Prevention:	Wash thoroughly after handling. Wear eye and face protection.
Response:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present
Storage: Disposal:	and easy to remove. Continue rinsing. If eye irritation persists: Get medical attention. Not prescribed Not prescribed

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS			
Hazardous Component(s)	CAS Number	Percentage*	
Ethylene glycol	107-21-1	1 - 5	
n-Butyl acetate	123-86-4	0.1 - 1	
Quartz (SiO2)	14808-60-7	0.1 - 1	

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES		
Inhalation:	Move to fresh air. If symptoms persist, seek medical advice.	
Skin contact:	Wash affected area immediately with soap and water. If symptoms develop and persist, get medical attention.	
Eye contact:	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.	
Ingestion:	Rinse out mouth. Do not drink. Never give anything by mouth to an unconscious person. If adverse health effects develop seek medical attentior	
Symptoms:	See Section 11.	
5.	FIRE FIGHTING MEASURES	
Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.	
Special firefighting procedures:	Water may be unsuitable as an extinguishing media, but may be helpful in keeping adjacent containers cool.	
Unusual fire or explosion hazards:	This product is an aqueous mixture which will not burn. If evaporated to dryness, the solid residue may pose a slight fire hazard.	
Hazardous combustion products:	Carbon dioxide Carbon monoxide. Oxides of nitrogen. Oxides of hydrocarbons.	

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Ventilate area. Do not allow product to enter sewer or waterways.
Clean-up methods:	Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up. Absorb spill with inert material. Shovel material into appropriate container for disposal. Wear appropriate protective equipment and clothing during clean-up.

7. HANDLING AND STORAGE

Handling:

Avoid contact with eyes. Avoid prolonged or repeated skin contact with this material. Use only with adequate ventilation. Wash hands before breaks and immediately after handling the product. Keep out of the reach of children.

Storage:

Keep from freezing.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Ethylene glycol	100 mg/m3 Ceiling Aerosol.	None	None	None
n-Butyl acetate	150 ppm TWA 200 ppm STEL	150 ppm (710 mg/m3) PEL	None	None
Quartz (SiO2)	0.025 mg/m3 TWA Respirable fraction.	2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.	None	None

Engineering controls:

Use local exhaust ventilation.

Respiratory protection:

Eye/face protection:

Skin protection:

..

No personal respiratory protective equipment normally required.

None required in normal use.

Use impermeable gloves and protective clothing as necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

pasty

Physical state: Color: Odor: Odor threshold: pH: Vapor pressure: Boiling point/range: Melting point/ range: Specific gravity: Vapor density: Flash point: Flammable/Explosive limits - lower: Flammable/Explosive limits - upper: Autoignition temperature: Evaporation rate: Solubility in water: Partition coefficient (n-octanol/water): **VOC content:**

Viscosity: Decomposition temperature: Black Acetate Not available. 6.5 - 7.5 17.5 mm hg (20 °C (68°F)) > 100 °C (> 212°F) Not available. 1.3 Heavier than air, (Air = 1)82.2 °C (179.96 °F) Pensky Martens closed cup Not available. Not available. Not available. 0.3 (Butyl acetate = 1) Soluble Not available. 1.15 %; 143 g/l (by weight, calculated using CARB method; g/L less water, less exempts calculated using SCAQMD method) 360,000 - 520,000 cp Not available.

10. STABILITY AND REACTIVITY Stability: Stable under normal conditions of storage and use. Hazardous reactions: Will not occur. Hazardous decomposition products: Carbon dioxide. Carbon monoxide. Oxides of nitrogen. Hydrocarbons. Incompatible materials: Not available. Reactivity: Not available. Conditions to avoid: None known I1. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation

Potential Health Effects/Symptoms

Inhalation:	Inhalation of vapors from uncured sealant may cause respiratory tract irritation. Contains crystalline silica (quartz), which is classified as a possible carcinogen. However, the crystalline silica present in this product is encapsulated in the liquid and will only be liberated if the product is sanded or abraded, and even then what is liberated will not be pure crystalline silica. Appropriate precautions, however, should be taken if the product is sanded or abraded to prevent personnel from breathing the dust.
Skin contact:	Prolonged or repeated contact with uncured sealant may cause skin irritation.
Eye contact:	Contact with uncured product may irritate the eyes.
Ingestion:	Ingestion of this product is unlikely. However, ingestion of product may produce gastrointestinal irritation and disturbances.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Ethylene glycol	Oral LD50 (RAT) = 5.89 g/kg Dermal LD50 (RABBIT) = 9,530 mg/kg	Blood, Bone Marrow, Central nervous system, Developmental, Eyes, Irritant, Kidney, Liver, Metabolic
n-Butyl acetate	Oral LD50 (RAT) = 14,000 mg/kg Oral LD50 (RAT) = 14,130 mg/kg Inhalation LC50 (, 4 h) = 160 mg/l	Irritant, Central nervous system
Quartz (SiO2)	None	Immune system, Lung, Some evidence of carcinogenicity

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Ethylene glycol	No	No	No
n-Butyl acetate	No	No	No
Quartz (SiO2)	Known To Be Human Carcinogen.	Group 1	No

12. ECOLOGICAL INFORMATION

Ecological information:

Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number:

It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR) Proper shipping name: Not regund Hazard class or division: None Identification number: None Packing group: None	
International Air Transportation (ICAO/IATA) Proper shipping name: Hazard class or division: Identification number: Packing group:	Not regulated None None None
Water Transportation (IMO/IMDG) Proper shipping name: Hazard class or division: Identification number: Packing group:	Not regulated None None None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: TSCA 12 (b) Export Notification:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory. None above reporting de minimis
CERCLA/SARA Section 302 EHS: CERCLA/SARA Section 311/312: CERCLA/SARA Section 313:	None above reporting de minimis Immediate Health, Fire, Delayed Health This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Ethylene glycol (CAS# 107-21-1).
California Proposition 65:	This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
Canada Regulatory Information	
CEPA DSL/NDSL Status:	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

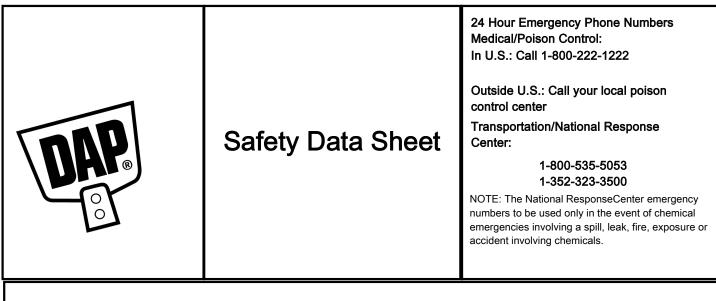
This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

Issue date: 12/15/2014

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IMPORTANT: Provide this information to employees, customers, and users of this product. Read this SDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

1. Identification

This Safety Data Sheet is available in American Spanish upon request. Los Datos de Serguridad pueden obtenerse en Espanol si lo riquiere.

Product Name:	Silicone Plus Premium Kitchen & Bath Sealant White	Revision Date:	7/28/2015
Product UPC Number:	070798087705	Supercedes Date:	New SDS
Product Use/Class:	Caulking Compound	SDS No:	00008770004
Manufacturer:	DAP Products Inc. 2400 Boston Street Suite 200 Baltimore, MD 21224-4723 888-327-8477 (non - emergency matters)		
Preparer:	Regulatory Department		

2. Hazards Identification

EMERGENCY OVERVIEW: High concentration of vapors may cause irritation to eyes and respiratory system.

GHS Classification Skin Sens. 1, STOT RE 2

Symbol(s) of Product



Signal Word Warning

GHS HAZARD STATEMENTS

Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.
STOT, repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.

GHS LABEL PRECAUTIONARY STATEMENTS

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.

GHS SDS PRECAUTIONARY STATEMENTS

P363

Wash contaminated clothing before reuse.

3. Composition/Information on Ingredients

Chemical Name	CAS-No.	Wt. % GHS Symbols	GHS Statements
Silica, amorphous	7631-86-9	2.5-10 GHS03-GHS07	H270-332
Methyltri(ethylmethylketoxime)silane	22984-54-9	2.5-10 GHS03-GHS07-	H270-317-319-373
		GHS08	
Titanium dioxide	13463-67-7	0.1-1.0 No Information	No Information
Methyl ethyl ketoxime	96-29-7	0.1-1.0 GHS03-GHS05-	H270-317-318-331-351
		GHS06-GHS08	

The text for GHS Hazard Statements shown above (if any) is given in the "Other information" Section.

4. First-aid Measures

FIRST AID - INHALATION: Material is not likely to present an inhalation hazard at ambient conditions. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical attention immediately.

FIRST AID - SKIN CONTACT: Wash skin with soap and water for 15 minutes. Get medical aid if symptoms persist.

FIRST AID - EYE CONTACT: In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention immediately.

FIRST AID - INGESTION: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately.

5. Fire-fighting Measures

UNUSUAL FIRE AND EXPLOSION HAZARDS: 465 <undefined>

SPECIAL FIREFIGHTING PROCEDURES: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam

6. Accidental Release Measures

ENVIRONMENTAL MEASURES: No Information

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations. Scrape up dried material and place into containers. Use personal protective equipment as necessary. In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations.

7. Handling and Storage

HANDLING: KEEP OUT OF REACH OF CHILDREN!DO NOT TAKE INTERNALLY. Avoid breathing vapor and contact with eyes, skin and clothing. Use only with adequate ventilation. Wash thoroughly after handling. Remove contact lenses before using. Do not handle contact lenses until all sealant has been cleaned from fingertips, nails and cuticles. Residual sealant may transfer to contact lenses and cause severe eye irritation.

STORAGE: Avoid excessive heat and freezing. Do not store at temperatures above 120 degrees F. Store away from caustics and oxidizers.

8. Exposure Controls/Personal Protection

Ingredients with Occupational Exposure Limits					
Chemical Name	ACGIH TLV-TWA	ACGIH-TLV STEL	OSHA PEL-TWA	OSHA PEL-CEILING	
Silica, amorphous	N.E.	N.E.	N.E.	N.E.	
Methyltri(ethylmethylketoxime)silane	N.E.	N.E.	N.E.	N.E.	
Titanium dioxide	10 mg/m3 TWA	N.E.	15 mg/m3 TWA total dust	N.E.	
Methyl ethyl ketoxime	N.E.	N.E.	N.E.	N.E.	

Further Advice: MEL = Maximum Exposure Limit OES = Occupational Exposure Standard SUP = Supplier's Recommendation Sk = Skin Sensitizer N.E. = Not Established

Personal Protection



RESPIRATORY PROTECTION: No personal respiratory protective equipment normally required.



SKIN PROTECTION: Wear nitrile or neoprene gloves.



EYE PROTECTION: Goggles or safety glasses with side shields.



OTHER PROTECTIVE EQUIPMENT: Not required under normal use.



HYGIENIC PRACTICES: Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use.

9. Physical and Chemical Properties

Appearance:	White	Physical State:	Paste
Odor:	Slight	Odor Threshold:	Not Established
Density, g/cm3:	1.04 - 1.04	pH:	Not Established
Freeze Point, °C:	Not Established	Viscosity (mPa.s):	Not Established
Solubility in Water:	Not Established	Partition Coeff., n-octanol/water:	Not Established
Decomposition Temperature, °C:	Not Established	Explosive Limits, %:	N.I N.I.
Boiling Range, °C:	N.I N.I.	Auto-Ignition Temperature, °C	Not Established
Minimum Flash Point, °C:	93.3	Vapor Pressure, mmHg:	No Information
Evaporation Rate:	Slower Than n-Butyl Acetate	Flash Method:	Seta Closed Cup
Vapor Density:	Heavier Than Air	Flammability:	No Information
Combustibility:	Does not support combustion	-	

(See "Other information" Section for abbreviation legend) (If product is an aerosol, the flash point stated above is that of the propellant.)

10. Stability and Reactivity

STABILITY: This product is considered stable under normal and anticipated storage and handling conditions.

CONDITIONS TO AVOID: Oxidizing agents. Excessive heat and freezing.

INCOMPATIBILITY: Keep away from strong oxidizing agents. Incompatible with strong bases and oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal decomposition products, i.e., COx, NOx.

11. Toxicological Information

EFFECT OF OVEREXPOSURE - INHALATION: During application and cure, this product releases methanol. Inhalation may cause irritation to the respiratory tract (nose, mouth, mucous membranes). May cause allergic respiratory reaction.

EFFECT OF OVEREXPOSURE - SKIN CONTACT: Direct skin contact may cause irritation. May cause allergic skin reaction.

EFFECT OF OVEREXPOSURE - EYE CONTACT: May cause mild eye irritation.

EFFECT OF OVEREXPOSURE - INGESTION: Single dose oral toxicity is very low. Amounts ingested incidental to industrial handling are not likely to cause injury; however, ingestion of large amounts may cause injury. Ingestion of large amounts may cause nausea, gastrointestinal upset, and pain. May cause liver and kidney damage, and central nervous system depression. Ingestion may result in obstruction when material hardens.

CARCINOGENICITY: No Information

EFFECT OF OVEREXPOSURE - CHRONIC HAZARDS: Repeated or prolonged exposure may cause irritation of eyes and skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Inhalation, Skin Contact

Acute Toxicity Values

The acute effects of this product have not been tested. Data on individual components are tabulated below

<u>CAS-No.</u> 7631-86-9	<u>Chemical Name</u> Silica, amorphous	<u>Oral LD50</u> >3300 mg/kg Rat	<mark>Dermal LD50</mark> >5000 mg/kg Rabbit	<u>Vapor LC50</u> >20 mg/L
22984-54-9	Methyltri(ethylmethylketoxime)silane	>2520 mg/kg Rat	>2000 mg/kg Rat	>50 mg/L Rat
13463-67-7	Titanium dioxide	>10000 mg/kg Rat	>5000 mg/kg Rabbit	>20 mg/L
96-29-7	Methyl ethyl ketoxime	2326 mg/kg Rat	2702 mg/kg Rabbit	>4.83 mg/L Rat

N.I. = No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Ecological injuries are not known or expected under normal use.

13. Disposal Information

DISPOSAL INFORMATION: This product does not meet the definition of a hazardous waste according to U.S. EPA Hazardous Waste Management Regulation, 40 CFR Section 261. Dispose as hazardous waste according to all local, state, federal and provincial regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste. Do not flush into surface water or sanitary sewer system.

14. Transport Information

SPECIAL TRANSPORT PRECAUTIONS: No Information

DOT UN/NA Number:	N.A.
DOT Proper Shipping Name:	Not Regulated
DOT Technical Name:	N.A.
DOT Hazard Class:	N.A.
Hazard SubClass:	N.A.
Packing Group:	N.A.

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Acute Health Hazard, Chronic Health Hazard

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

No Sara 313 components exist in this product.

TOXIC SUBSTANCES CONTROL ACT:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt. This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

CALIFORNIA PROPOSITION 65 CARCINOGENS AND REPORODUCTIVE TOXINS

CALIFORNIA PROPOSITION 65: WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

International Regulations: As follows -

CANADIAN WHMIS:

This SDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

WHMIS Class Consumer Commodity

16. Other Information				
Revision Date:	7/28/2015	Supersedes Date: New MSDS		
Reason for revision:	HazCom2012/GHS Conversion			
Datasheet produced by:	Regulatory Department			
HMIS Ratings:				
Health:2*Flammability:	1 Reactivity:	0 Personal Protection: X		

VOC Less Water Less Exempt Solvent, g/L31.0

VOC Material, g/L:31

VOC as Defined by California Consumer Product Regulation, Wt/Wt%:3.0

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

- H270 May cause or intensify fire; oxidiser.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.

H332

H351

Harmful if inhaled.

Suspected of causing cancer. Classified as Category 2 based on limited evidence on human and/or animal studies. Mixtures with concentrations of suspected carcinogens ingredients at concentration present between 0.1% and 1.0% labelling the SDS will be optional depending on authorities. If Category 2 carcinogenic present at a concentration of 1% or above labelling the SDS will be expected. Routes of exposure are dependent on ingredient form.

H373 May cause damage to organs through prolonged or repeated exposure.

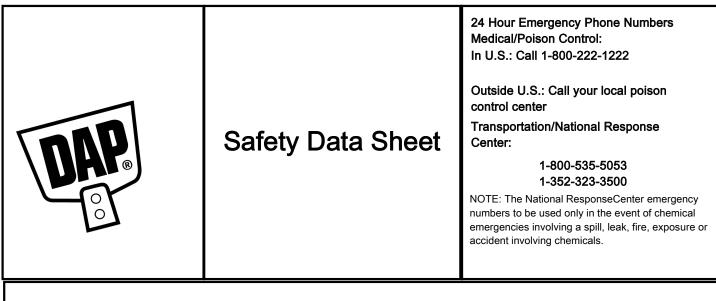
Icons for GHS Pictograms shown in Section 3 describing each ingredient:

GHS03	۲
GHS05	A PROVIDENCE OF THE PROVIDENCE
GHS06	
GHS07	
GHS08	٠

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS. Since thisdocument is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.





IMPORTANT: Provide this information to employees, customers, and users of this product. Read this SDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

1. Identification

This Safety Data Sheet is available in American Spanish upon request. Los Datos de Serguridad pueden obtenerse en Espanol si lo riquiere.

Product Name:	Kwik Seal Tub & Tile Adhesive Caulk - All Colors	Revision Date:	6/19/2015
Product UPC Number:	18001 18013 18002	Supercedes Date:	New SDS
Product Use/Class:	Caulking Compound	SDS No:	00010009001
Manufacturer:	DAP Products Inc. 2400 Boston Street Suite 200 Baltimore, MD 21224-4723 888-327-8477 (non - emergency matters)		
Preparer:	Regulatory Department		

2. Hazards Identification

EMERGENCY OVERVIEW: Under normal use conditions, this product is not expected to cause adverse health effects.

GHS Classification

Not a hazardous substance or mixture.

Symbol(s) of Product

None

Signal Word

Not a hazardous substance or mixture.

3. Composition/Information on Ingredients

Chemical Name	CAS-No.	Wt. % GHS Symbols	GHS Statements
Limestone	1317-65-3	50-75 GHS03	H270
Diethylene glycol dibenzoate	120-55-8	2.5-10 GHS03-GHS07	H270-312

Titanium dioxide	13463-67-7	0.1-1.0 No Information	No
Quartz	14808-60-7	0.1-1.0 GHS03-GHS07	H27

No Information H270-302

The text for GHS Hazard Statements shown above (if any) is given in the "Other information" Section.

4. First-aid Measures

FIRST AID - INHALATION: Material is not likely to present an inhalation hazard at ambient conditions. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical attention immediately.

FIRST AID - SKIN CONTACT: No health hazards are known to exist. In case of contact, wash skin immediately with soap and water.

FIRST AID - EYE CONTACT: In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention immediately.

FIRST AID - INGESTION: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately.

5. Fire-fighting Measures

UNUSUAL FIRE AND EXPLOSION HAZARDS: 465 <undefined>

SPECIAL FIREFIGHTING PROCEDURES: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam, Water Fog

6. Accidental Release Measures

ENVIRONMENTAL MEASURES: No Information

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations. Scrape up dried material and place into containers. Use personal protective equipment as necessary. In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations.

7. Handling and Storage

HANDLING: KEEP OUT OF REACH OF CHILDREN!DO NOT TAKE INTERNALLY. Use only with adequate ventilation. Ensure fresh air entry during application and drying. Wash thoroughly after handling.

STORAGE: Avoid excessive heat and freezing. Do not store at temperatures above 120 degrees F. Store away from caustics and oxidizers.

8. Exposure Controls/Personal Protection

Ingredients with Occupational Exposu	ure Limits			
<u>Chemical Name</u>	ACGIH TLV-TWA	ACGIH-TLV STEL	<u>OSHA PEL-TWA</u>	OSHA PEL-CEILING
Limestone	N.E.	N.E.	15 mg/m3 TWA total dust, 5 mg/m3 TWA respirable fraction	N.E. 3
Diethylene glycol dibenzoate	N.E.	N.E.	N.E.	N.E.
Titanium dioxide	10 mg/m3 TWA	N.E.	15 mg/m3 TWA total dust	N.E.
Quartz	0.025 mg/m3 TWA respirable fraction	N.E.	N.E.	N.E.

Further Advice: MEL = Maximum Exposure Limit OES = Occupational Exposure Standard SUP = Supplier's Recommendation Sk = Skin Sensitizer N.E. = Not Established

Personal Protection



RESPIRATORY PROTECTION: No personal respiratory protective equipment normally required. National Institute for Occupational Safety and Health (NIOSH) has recommended that the permissible exposure limit be changed to 50 micrograms respirable free silica per cubic meter of air (0.05 mg/m3) as determined by a full shift sample up to 10-hour work shift.



SKIN PROTECTION: Rubber gloves.



EYE PROTECTION: Goggles or safety glasses with side shields.



OTHER PROTECTIVE EQUIPMENT: Not required under normal use.



HYGIENIC PRACTICES: Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use.

9. Physical and Chemical Properties

Colored	Physical State:	
	Filysical State.	Paste
Very Slight Ammonia	Odor Threshold:	Not Established
1.56 - 1.58	pH:	Between 7.0 and 12.0
Not Established	Viscosity (mPa.s):	Not Established
Not Established	Partition Coeff., n-octanol/water:	Not Established
Not Established	Explosive Limits, %:	N.I N.I.
N.I N.I.	Auto-Ignition Temperature, °C	Not Established
93.3	Vapor Pressure, mmHg:	No Information
Slower Than n-Butyl Acetate	Flash Method:	Seta Closed Cup
Heavier Than Air	Flammability:	No Information
Does not support combustion	-	
	1.56 - 1.58 Not Established Not Established Not Established N.I N.I. 93.3 Slower Than n-Butyl Acetate Heavier Than Air	1.56 - 1.58pH:Not EstablishedViscosity (mPa.s):Not EstablishedPartition Coeff., n-octanol/water:Not EstablishedExplosive Limits, %:N.I N.I.Auto-Ignition Temperature, °C93.3Vapor Pressure, mmHg:Slower Than n-Butyl AcetateFlash Method:Heavier Than AirFlammability:

(See "Other information" Section for abbreviation legend) (If product is an aerosol, the flash point stated above is that of the propellant.)

10. Stability and Reactivity

STABILITY: Stable under recommended storage conditions.

CONDITIONS TO AVOID: Excessive heat and freezing.

INCOMPATIBILITY: Incompatible with strong bases and oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal decomposition products, i.e., COx, NOx.

11. Toxicological Information

EFFECT OF OVEREXPOSURE - INHALATION: Under normal use conditions, this product is not expected to cause adverse health effects. Inhalation of vapors in high concentration may cause mild irritation of respiratory system (nose, mouth, mucous membranes).

EFFECT OF OVEREXPOSURE - SKIN CONTACT: Under normal use conditions, this product is not expected to cause adverse health effects. Prolonged or repeated contact with skin may cause mild irritation.

EFFECT OF OVEREXPOSURE - EYE CONTACT: Under normal use conditions, this product is not expected to cause adverse health effects. Direct eye contact may cause irritation.

EFFECT OF OVEREXPOSURE - INGESTION: Under normal use conditions, this product is not expected to cause adverse health

effects. Single dose oral toxicity is very low. Amounts ingested incidental to industrial handling are not likely to cause injury; however, ingestion of large amounts may cause injury.

CARCINOGENICITY: No Information

EFFECT OF OVEREXPOSURE - CHRONIC HAZARDS: Repeated or prolonged exposure may cause irritation of eyes and skin. The International Agency for Research on Cancer (IARC) has determined that crystalline silica in the form of quartz or cristobalite that is inhaled from occupational sources is carcinogenic to humans (Group 1- carcinogenic to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (published in June 1997) in conjunction with the use of these materials. The National Toxicology Program (NTP) classifies respirable crystalline silica as "known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (Group A2). Breathing dust containing respirable crystalline silica may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may have the following serious chronic health effects: Excessive inhalation of respirable dust can cause pneumoconiosis, a respiratory disease, which can result in delayed, progressive, disabling and sometimes fatal lung injury. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. Smoking exacerbates this disease. Individuals with pneumoconiosis are predisposed to develop tuberculosis. There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin and other internal organs) and kidney disease.

PRIMARY ROUTE(S) OF ENTRY: Inhalation, Skin Contact

Acute Toxicity Values

The acute effects of this product have not been tested. Data on individual components are tabulated below

<u>CAS-No.</u> 1317-65-3	<u>Chemical Name</u> Limestone	<u>Oral LD50</u> 6450 mg/kg Rat	<mark>Dermal LD50</mark> ≥2000 mg/kg	<u>Vapor LC50</u> >20 mg/L
120-55-8	Diethylene glycol dibenzoate	2830 mg/kg Rat	2000 mg/kg Rabbit	> 200 mg/L Rat
13463-67-7	Titanium dioxide	>10000 mg/kg Rat	>5000 mg/kg Rabbit	>20 mg/L
14808-60-7	Quartz	500 mg/kg Rat	>2000 mg/kg	>20 mg/L

N.I. = No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Ecological injuries are not known or expected under normal use.

13. Disposal Information

DISPOSAL INFORMATION: This product does not meet the definition of a hazardous waste according to U.S. EPA Hazardous Waste Management Regulation, 40 CFR Section 261. Dispose as hazardous waste according to all local, state, federal and provincial regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

14. Transport Information

SPECIAL TRANSPORT PRECAUTIONS: No Information

DOT UN/NA Number:	N.A.
DOT Proper Shipping Name:	Not Regulated.
DOT Technical Name:	N.A.
DOT Hazard Class:	N.A.
Hazard SubClass:	N.A.
Packing Group:	N.A.

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Acute Health Hazard, Chronic Health Hazard

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

No Sara 313 components exist in this product.

TOXIC SUBSTANCES CONTROL ACT:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt. This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

CALIFORNIA PROPOSITION 65 CARCINOGENS AND REPORODUCTIVE TOXINS

CALIFORNIA PROPOSITION 65: No Information

International Regulations: As follows -

CANADIAN WHMIS:

This SDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

WHMIS Class Consumer Commodity

16. Other Information									
Revision Date:		6	/19/2015		Supersedes Date: New MSDS		Supersedes Date: New MSDS		S
Reason for revision: HazCom2012/GHS Conversion		6 Conversion							
Datasheet produced by: Regulatory Department									
HMIS Rati	ngs:								
Health:	1	Flammability:	0	Reactivity:	0	Personal Protection	on:	Х	
	L								

VOC Less Water Less Exempt Solvent, g/L34.5

VOC Material, g/L:22

VOC as Defined by California Consumer Product Regulation, Wt/Wt%:0.6

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H270 May cause or intensify fire; oxidiser.

- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.

Icons for GHS Pictograms shown in Section 3 describing each ingredient:



Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

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Version: 2.0 Revision Date: 03/30/2016

SAFETY DATA SHEET

1. Identification

Material name: VULKEM 116 LV WHITE 30 CTG/CS Material: 426806L 323

Recommended use and restriction on use

Recommended use: Sealant Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

Tremco U.S Sealants 3735 Green Road Beachwood OH 44122 US

Contact person: Telephone: Emergency telephone number:

EH&S Department 216-292-5000 1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Health Hazards	
Acute toxicity (Inhalation - vapor)	Category 4
Respiratory sensitizer	Category 1
Skin sensitizer	Category 1
Germ Cell Mutagenicity	Category 1B
Carcinogenicity	Category 1A
Unknown toxicity - Health	
Acute toxicity, oral	32.9 %
Acute toxicity, dermal	42.23 %
Acute toxicity, inhalation, vapor Acute toxicity, inhalation, dust or mist	97.37 % 99.01 %
	55.01 70
Environmental Hazards	_
Acute hazards to the aquatic environment	Category 2
Unknown toxicity - Environment	
Acute hazards to the aquatic environment	78.74 %
Chronic hazards to the aquatic environment	100 %

Label Elements

Hazard Symbol:



(!	
Signal Word:	Danger
Hazard Statement:	Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause genetic defects. May cause cancer. Toxic to aquatic life.
Precautionary Statement:	
Prevention:	Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. [In case of inadequate ventilation] wear respiratory protection. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Avoid release to the environment.
Response:	IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Call a POISON CENTER/doctor if you feel unwell. Specific treatment (see this label). Wash contaminated clothing before reuse.
Storage:	Store locked up.
Disposal:	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Other hazards which do not result in GHS classification:	None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Calcium Carbonate (Limestone)	1317-65-3	10 - 30%
Titanium dioxide	13463-67-7	5 - 10%
Polyethylene	9002-88-4	3 - 7%
Heavy aromatic naphtha	64742-94-5	1 - 5%
Aromatic petroleum distillates	64742-95-6	1 - 5%
1,2,4-Trimethylbenzene	95-63-6	0.5 - 1.5%



4,4'-Methylene bis(phenylisocyanate)	101-68-8	0.5 - 1.5%
Aluminum oxide	1344-28-1	0.1 - 1%
1,3,5-Trimethylbenzene	108-67-8	0.1 - 1%
Polymethylene polyphenyl isocyanate	9016-87-9	0.1 - 1%
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7	0.1 - 1%

All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion:	Call a POISON CENTER/doctor//if you feel unwell. Rinse mouth.	
Inhalation:	Call a physician or poison control center immediately. If breathing stop provide artificial respiration. Move to fresh air. If breathing is difficult, of oxygen.	
Skin Contact:	If skin irritation occurs: Get medical advice/attention. Destroy or thoro clean contaminated shoes. Immediately remove contaminated clothin shoes and wash skin with soap and plenty of water. If skin irritation or allergic skin reaction develops, get medical attention.	g and
Eye contact:	Any material that contacts the eye should be washed out immediately water. If easy to do, remove contact lenses. If eye irritation persists: C medical advice/attention.	
Most important symptoms/effect	ts, acute and delayed	
Symptoms:	May cause skin and eye irritation.	
Indication of immediate medical	attention and special treatment needed	
Treatment:	Symptoms may be delayed.	
5. Fire-fighting measures		
General Fire Hazards:	No unusual fire or explosion hazards noted.	
Suitable (and unsuitable)	extinguishing media	
Suitable extinguishing media:	Use fire-extinguishing media appropriate for surrounding materials.	
Unsuitable extinguishing media:	Do not use water jet as an extinguisher, as this will spread the fire.	
Specific hazards arising from the chemical:	During fire, gases hazardous to health may be formed.	
Special protective equipment a	nd precautions for firefighters	
Special fire fighting procedures:	No data available.	
		3/19



Special protective equipment for fire-fighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
6. Accidental release measures	s
Personal precautions, protective equipment and emergency procedures:	Ventilate closed spaces before entering them. Evacuate area. See Section 8 of the SDS for Personal Protective Equipment. Keep upwind. Keep unauthorized personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Methods and material for containment and cleaning up:	Collect spillage in containers, seal securely and deliver for disposal according to local regulations.
Notification Procedures:	In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
Environmental Precautions:	Avoid release to the environment. Prevent further leakage or spillage if safe to do so.
7. Handling and storage	
Precautions for safe handling:	Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Use mechanical ventilation in case of handling which causes formation of dust.
Conditions for safe storage, including any incompatibilities:	Store locked up.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	type	Exposure Limit Values	Source
Calcium Carbonate (Limestone) - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Calcium Carbonate (Limestone) - Respirable fraction.	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Titanium dioxide	TWA	10 mg/m3	US. ACGIH Threshold Limit Values (2011)
Titanium dioxide - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Polyethylene - Inhalable particles.	TWA	10 mg/m3	US. ACGIH Threshold Limit Values (03 2015)



Polyethylene - Respirable particles.	TWA	3 mg/m3	US. ACGIH Threshold Limit Values (03 2015)
Polyethylene -	PEL	5 mg/m3	
Respirable fraction.		5 mg/mc	Contaminants (29 CFR 1910.1000) (02 2006)
Polyethylene - Total	PEL	15 mg/m3	
dust.		10 mg/m	Contaminants (29 CFR 1910.1000)
		15	(02 2006)
	TWA	15 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
	TWA	50 millions	
		of particles	i 1910.1000) (2000)
		per cubic	
		foot of ai	
Polyethylene - Respirable fraction.	TWA	5 mg/m3	1910.1000) (2000)
	TWA	15 millions	
		of particles	
		per cubic	
		foot of ai	
Heavy aromatic	TWA	200	
naphtha - Non-aerosol. - as total hydrocarbon		mg/m3	6 (03 2014)
vapor			
Heavy aromatic	PEL	100 ppm 400	
naphtha		mg/m3	
			(02 2006)
1,2,4-Trimethylbenzene	TWA	25 ppm	US. ACGIH Threshold Limit Values (2011)
4,4'-Methylene	TWA	0.005 ppm	US. ACGIH Threshold Limit Values
bis(phenylisocyanate)			(2011)
	Ceiling	0.02 ppm 0.2 mg/m3	US. OSHA Table Z-1 Limits for Air
	g		Contaminants (29 CFR 1910.1000) (02 2006)
Aluminum oxide -	TWA	1 mg/m3	
Respirable fraction.		3.	(2011)
·	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air
			Contaminants (29 CFR 1910.1000)
			(02 2006)
Aluminum oxide - Total	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air
dust.			Contaminants (29 CFR 1910.1000)
			(02 2006)
1,3,5-Trimethylbenzene	TWA	25 ppm	US. ACGIH Threshold Limit Values
		0.005	(2011)
Polymethylene	TWA	0.005 ppm	US. ACGIH Threshold Limit Values
polyphenyl isocyanate		0.00 0.0 / 1	(2011)
	Ceiling	0.02 ppm 0.2 mg/m3	
			Contaminants (29 CFR 1910.1000) (02 2006)
Crystalline Silica	TWA	0.025	
(Quartz)/ Silica Sand -		mg/m3	
Respirable fraction.			
Crystalline Silica	TWA	2.4	N
(Quartz)/ Silica Sand -		millions o	f 1910.1000) (2000)
Respirable.		particles	
		per cubic	



		foot of air	
	TWA	0.1 mg/m3	US. OSHA Table Z-3 (29 CFR
			1910.1000) (2000)
Crystalline Silica	TWA	0.3 mg/m3	US. OSHA Table Z-3 (29 CFR
(Quartz)/ Silica Sand -		_	1910.1000) (2000)
Total dust.			

Chemical name	type	Exposure Limit Values	Source
Diisodecyl phthalate	TWAEV	5 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Calcium Carbonate (Limestone) - Total dust.	STEL	20 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)



Calcium Carbonate (Limestone) - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Calcium Carbonate (Limestone) - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Titanium dioxide - Total dust.	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Titanium dioxide - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Titanium dioxide	TWAEV	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Titanium dioxide - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Polyethylene - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
Polyethylene - Total dust.	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
Polyethylene - Respirable particles.	TWAEV	3 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Polyethylene - Inhalable	TWAEV	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Polyethylene - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (11 2011)
Heavy aromatic naphtha - Non-aerosol. - as total hydrocarbon vapor	TWA	200 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
Heavy aromatic naphtha - Non-aerosol. - as total hydrocarbon vapor	TWAEV	200 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)



Heavy aromatic naphtha	TWA	400 ppm	1,590 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (11 2011)
1,2,4-Trimethylbenzene	TWA	25 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
1,2,4-Trimethylbenzene	TWAEV	25 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
1,2,4-Trimethylbenzene	TWA	25 ppm	123 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
4,4'-Methylene bis(phenylisocyanate)	CEILING	0.01 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	0.005 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
4,4'-Methylene bis(phenylisocyanate)	TWAEV	0.005 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	CEV	0.02 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
4,4'-Methylene bis(phenylisocyanate)	TWA	0.005 ppm	0.051 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
1,3,5-Trimethylbenzene	TWA	25 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
1,3,5-Trimethylbenzene	TWAEV	25 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
1,3,5-Trimethylbenzene	TWA	25 ppm	123 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Polymethylene polyphenyl isocyanate	TWA	0.005 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	CEILING	0.01 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for



		0.005		Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	0.005 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	CEILING	0.01 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Polymethylene polyphenyl isocyanate	TWAEV	0.005 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	CEV	0.02 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Polymethylene polyphenyl isocyanate	TWA	0.005 ppm	0.051 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA		0.025 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Crystalline Silica (Quartz)/ Silica Sand - Respirable.	TWAEV		0.10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	TWA		0.1 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)

Appropriate Engineering Controls

Mechanical ventilation or local exhaust ventilation may be required. Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of dust.

Individual protection measures, such as personal protective equipment

General information:	Use personal protective equipment as required.
Eye/face protection:	Wear goggles/face shield.
Skin Protection Hand Protection:	Use suitable protective gloves if risk of skin contact.
Other:	Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.



Respiratory Protection:	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.
Hygiene measures:	Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

9. Physical and chemical properties

Appearance	
Physical state:	solid
Form:	Paste
Color:	White
Odor:	Mild
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash Point:	99 °C 210 °F(ISO 3679 (seta closed))
Evaporation rate:	Slower than n-Butyl Acetate
Flammability (solid, gas):	No
Upper/lower limit on flammability or explose	sive limits
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density:	1.16
Solubility(ies)	
Solubility in water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.
40 Stability and reactivity	

10. Stability and reactivity

Reactivity:

No data available.



Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Avoid heat or contamination.
Incompatible Materials:	Alcohols. Amines. Strong acids. Avoid contact with oxidizing agents (e.g. nitric acid, peroxides and chromates). Strong bases. Water, moisture.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	May be ingested by accident. Ingestion may cause irritation and malaise.
Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	Causes mild skin irritation. May cause an allergic skin reaction.
Eye contact:	Eye contact is possible and should be avoided.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral Product:	ATEmix: 10,063.61 mg/kg
Dermal Product:	ATEmix: 17,336.47 mg/kg
Inhalation Product:	ATEmix: 17.97 mg/l
Repeated dose toxicity Product:	No data available.
Skin Corrosion/Irritation Product:	No data available.
Specified substance(s): Titanium dioxide	in vivo (Rabbit): Experimental result, Supporting study



	Heavy aromatic naphtha	in vivo (Rabbit): Experimental result, Key study
	Aromatic petroleum distillates	in vivo (Rabbit): Experimental result, Key study
	1,2,4-Trimethylbenzene	in vivo (Rabbit): Read-across from supporting substance (structural analogue or surrogate), Key study
	4,4'-Methylene bis(phenylisocyanate)	in vivo (Rabbit): Read-across based on grouping of substances (category approach), Key study
	Aluminum oxide	in vivo (Rabbit): Experimental result, Key study
	1,3,5-Trimethylbenzene	in vivo (Rabbit): Experimental result, Key study
Serious	s Eye Damage/Eye Irritati	on
	roduct:	No data available.
Р		
Р	roduct: pecified substance(s):	No data available.
Р	roduct: pecified substance(s): Titanium dioxide Heavy aromatic	No data available. in vivo (Rabbit, 24 hrs): Not irritating
Р	roduct: pecified substance(s): Titanium dioxide Heavy aromatic naphtha Aromatic petroleum	No data available. in vivo (Rabbit, 24 hrs): Not irritating in vivo (Rabbit, 24 - 72 hrs): Not irritating
Р	roduct: pecified substance(s): Titanium dioxide Heavy aromatic naphtha Aromatic petroleum distillates	No data available. in vivo (Rabbit, 24 hrs): Not irritating in vivo (Rabbit, 24 - 72 hrs): Not irritating in vivo (Rabbit, 24 - 72 hrs): Not irritating
Р	roduct: pecified substance(s): Titanium dioxide Heavy aromatic naphtha Aromatic petroleum distillates 1,2,4-Trimethylbenzene 4,4'-Methylene	No data available. in vivo (Rabbit, 24 hrs): Not irritating in vivo (Rabbit, 24 - 72 hrs): Not irritating in vivo (Rabbit, 24 - 72 hrs): Not irritating in vivo (Rabbit, 30 min): Not irritating
P S Respira	roduct: pecified substance(s): Titanium dioxide Heavy aromatic naphtha Aromatic petroleum distillates 1,2,4-Trimethylbenzene 4,4'-Methylene bis(phenylisocyanate)	No data available. in vivo (Rabbit, 24 hrs): Not irritating in vivo (Rabbit, 24 - 72 hrs): Not irritating in vivo (Rabbit, 24 - 72 hrs): Not irritating in vivo (Rabbit, 30 min): Not irritating in vivo (Rabbit, 24 - 72 hrs): Not irritating in vivo (Rabbit, 24 hrs): Not irritating



Version: 2.0 Revision Date: 03/30/2016

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Titanium dioxide Overall evaluation: Possibly carcinogenic to humans.

Crystalline Silica Overall evaluation: Carcinogenic to humans. (Quartz)/ Silica Sand

US. National Toxicology Program (NTP) Report on Carcinogens: Crystalline Silica Known To Be Human Carcinogen. (Quartz)/ Silica Sand

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): No carcinogenic components identified

Germ Cell Mutagenicity

In vitro Product:	No data available.
In vivo Product:	No data available.
Reproductive toxicity Product:	No data available.
Specific Target Organ Toxicit Product:	y - Single Exposure No data available.
Specific Target Organ Toxicit Product:	y - Repeated Exposure No data available.
Aspiration Hazard	
Product:	No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish Product:

No data available.

Specified substance(s):



1,2,4-Trimethylbenzene	LC 50 (Fathead minnow (Pimephales promelas), 96 h): 7.19 - 8.28 mg/l Mortality	
1,3,5-Trimethylbenzene	LC 50 (Goldfish (Carassius auratus), 96 h): 9.89 - 15.05 mg/l Mortality	
Aquatic Invertebrates Product:	No data available.	
Specified substance(s): 1,2,4-Trimethylbenzene	LC 50 (Scud (Elasmopus pectinicrus), 24 h): 4.89 - 5.62 mg/l Mortality	
1,3,5-Trimethylbenzene	EC 50 (Water flea (Daphnia magna), 24 h): 50 mg/l Intoxication	
Chronic hazards to the aquati	c environment:	
Fish Product:	No data available.	
Specified substance(s): Titanium dioxide	ED 0 (Phoxinus phoxinus, 30 d): >= 1,000 mg/l Experimental result, Supporting study LC 10 (Oncorhynchus mykiss, 28 d): 0.981 mg/l Read-across from supporting substance (structural analogue or surrogate), Supporting study LC 50 (Oncorhynchus mykiss, 28 d): 7.31 mg/l Read-across from supporting substance (structural analogue or surrogate), Supporting study LC 1 (Oncorhynchus mykiss, 28 d): 0.191 mg/l Read-across from supporting substance (structural analogue or surrogate), Supporting study LC 1 (Oncorhynchus mykiss, 28 d): 0.191 mg/l Read-across from supporting substance (structural analogue or surrogate), Supporting study LC 0 (Coregonus autumnalis migratorius G., 30 d): 3 mg/l Experimental result, Supporting study	
Heavy aromatic naphtha	NOAEL (Oncorhynchus mykiss, 28 d): 0.098 mg/l QSAR QSAR, Key study	
Aromatic petroleum distillates	LL 50 (Pimephales promelas, 14 d): 5.2 mg/l Experimental result, Supporting study EC 50 (Daphnia magna, 21 d): 10 mg/l Other, Key study NOAEL (Pimephales promelas, 14 d): 2.6 mg/l Experimental result, Supporting study NOAEL (Daphnia magna, 21 d): 2.6 mg/l Other, Key study	
Aluminum oxide	NOAEL (Pimephales promelas, 28 d): 4.7 mg/l Experimental result, Weight of Evidence study IC 25 (Pimephales promelas, 7 d): 11.59 mg/l Experimental result, Weight of Evidence study LOAEL (Salvelinus fontinalis, 60 d): 0.35 mg/l Experimental result, Weight of Evidence study NOAEL (Pimephales promelas, 7 d): 0.4 mg/l Read-across based on grouping of substances (category approach), Weight of Evidence study NOAEL (Pimephales promelas, 7 d): >= 0.831 mg/l Experimental result, Weight of Evidence study	
Aquatic Invertebrates Product:	No data available.	
Toxicity to Aquatic Plants Product:	No data available.	



Persistence and Degradability		
Biodegradation Product:	No data available.	
BOD/COD Ratio Product:	No data available.	
Bioaccumulative Potential Bioconcentration Factor (Bo Product:	CF) No data available.	
Partition Coefficient n-octar Product:	nol / water (log Kow) No data available.	
Mobility in Soil:	No data available.	
Other Adverse Effects:	Toxic to aquatic organisms.	
13. Disposal considerations		
Disposal instructions:	Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.	
Contaminated Packaging:	No data available.	
14. Transport information		
TDG:		
Not Regulated		

CFR / DOT:

Not Regulated

IMDG:

Not Regulated

15. Regulatory information

US Federal Regulations



TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Chemical Identity	Reportable quantity	
P-chlorobenzotrifluoride	De minimis concentration:	1.0% One-Time Export Notification only.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity	Reportable quantity
4,4'-Methylene	5000 lbs.
bis(phenylisocyanate)	
Polymethylene	5000 lbs.
polyphenyl isocyanate	
Cumene	5000 lbs.
2,4-Toluene diisocyanate	100 lbs.
Xylene	100 lbs.
Toluene-2,6-Diisocyanate	100 lbs.
Ethylbenzene	1000 lbs.
Chromium	5000 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate (Acute) Health Hazards Delayed (Chronic) Health Hazard

SARA 302 Extremely Hazardous Substance

	<u>Reportable</u>		
Chemical Identity	quantity	Threshold Planning Quantity	
2,4-Toluene diisocyanate	100 lbs.	500 lbs.	
Toluene-2,6-Diisocyanate	100 lbs.	100 lbs.	

SARA 304 Emergency Release Notification Chemical Identity Reportable quantity

Chemical Identity	Reportable qu
Diisodecyl phthalate	
4,4'-Methylene	5000 lbs.
bis(phenylisocyanate)	
Polymethylene	5000 lbs.
polyphenyl isocyanate	
Cumene	5000 lbs.
2,4-Toluene diisocyanate	100 lbs.
Xylene	100 lbs.
Toluene-2,6-Diisocyanate	100 lbs.
Ethylbenzene	1000 lbs.
Chromium	5000 lbs.



SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
2,4-Toluene diisocyanate	500lbs
Toluene-2,6-Diisocyanate	100lbs
Calcium Carbonate	500 lbs
(Limestone)	
Titanium dioxide	500 lbs
Polyethylene	500 lbs
Heavy aromatic naphtha	500 lbs
Aromatic petroleum	500 lbs
distillates	
1,2,4-Trimethylbenzene	500 lbs
4,4'-Methylene	500 lbs
bis(phenylisocyanate)	
Aluminum oxide	500 lbs
1,3,5-Trimethylbenzene	500 lbs
Polymethylene polyphenyl	500 lbs
isocyanate	
Crystalline Silica (Quartz)/	500 lbs
Silica Sand	

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

Chemical Identity	Reportable quantity
Xylene	100 lbs.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

Chemical	Identity
Chennical	IGENTILY

Reportable quantity

2,4-Toluene diisocyanate	10000 lbs
Toluene-2,6-Diisocyanate	10000 lbs

US State Regulations

US. California Proposition 65

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity

Calcium Carbonate (Limestone) Titanium dioxide P-chlorobenzotrifluoride Heavy aromatic naphtha Crystalline Silica (Quartz)/ Silica Sand



Version: 2.0 Revision Date: 03/30/2016

US. Massachusetts RTK - Substance List

Chemical Identity

Calcium Carbonate (Limestone) Titanium dioxide Heavy aromatic naphtha Crystalline Silica (Quartz)/ Silica Sand 2,4-Toluene diisocyanate Toluene-2,6-Diisocyanate

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Diisodecyl phthalate Calcium Carbonate (Limestone) Titanium dioxide Heavy aromatic naphtha

US. Rhode Island RTK

Chemical Identity Diisodecyl phthalate

Other Regulations:

Regulatory VOC (less water	47 g/l
and exempt solvent):	
VOC Method 310:	2.57 %

Inventory Status:

Australia AICS:

Canada DSL Inventory List:

EINECS, ELINCS or NLP:

Japan (ENCS) List:

China Inv. Existing Chemical Substances:

Korea Existing Chemicals Inv. (KECI):

Canada NDSL Inventory:

Philippines PICCS:

One or more components in this product are not listed on or exempt from the Inventory.

All components in this product are listed on or exempt from the Inventory.

One or more components in this product are not listed on or exempt from the Inventory.

One or more components in this product are not listed on or exempt from the Inventory.

One or more components in this product are not listed on or exempt from the Inventory.

One or more components in this product are not listed on or exempt from the Inventory.

One or more components in this product are not listed on or exempt from the Inventory.

One or more components in this product are not listed on or exempt from the Inventory.



US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	One or more components in this product are not listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.

16.Other information, including date of preparation or last revision

Revision Date:	03/30/2016
Version #:	2.0
Further Information:	No data available.
Disclaimer:	For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

Section B

IPS, WELD-ON, Solvents & Cements

Contents:

1. Glue, 717

2. Primer, p-68

3. Cpvc glue, Gold

4. Cpvc glue, Orange

5. Cpvc glue, Orange

6. Clear primer, p-70





GHS SAFETY DATA SHEET

WELD-ON® 717[™] Low VOC Cements for PVC Plastic Pipe

Date Revised: APR 2015 Supersedes: NOV 2014

				Binc						
PRODUCT NAME:	WELD-ON® 717™ Low VC		riastic	; Pipe						
PRODUCT USE:	Low VOC Solvent Cement f	•				tion				
SUPPLIER:		M.	ANUFA	ACTURER:	IPS Corporat 17109 South	n Main Street, 0	Gardena. CA	90248-3127		
					P.O. Box 379	9, Gardena, C/				
					Tel. 1-310-89					
•	tion: CHEMTEL Tel. 800.255		85 (Inte	ernational)	Medical: CH	IEMTEL Tel. 8	00.255-3924,	+1 813-248-	0585 (Internation	al)
	RDS IDENTIFICATIO	N								
GHS CLASSIFICATION:	alth		Enviror	nmental			Ph	iysical		
Acute Toxicity:	Category 4	Acute Toxicity:		None Known	1	Flammable L		,	Category 2	
Skin Irritation:	Category 3	Chronic Toxicity:		None Known	I					
Skin Sensitization: Eye:	NO Category 2									
GHS LABEL:		Signal	Word:			WHMIS CLASS		CLASS B, D		
GIG LABLE.		-	nger			WHMIS CLASS	SIFICATION.	CLASS D, E		
	Hazard Statements					Precautiona	ary Statement	<u>s</u>		
H225: Highly flammable liquid a						arks/open flame		No smoking		
H319: Causes serious eye irrita H332: Harmful if inhaled	tion					ne/gas/mist/vapo protective clothin		/face protectio	'n	
H335: May cause respiratory irr	itation								sition comfortable fo	or breathing
H336: May cause drowsiness of				P403+P233: S	tore in a well ver	ntilated place. Ke	ep container tig	htly closed		
H351: Suspected of causing ca EUH019: May form explosive p				P501: Dispose	of contents/con	tainer in accorda	ince with local re	egulation		
	POSITION/INFORMA			TS						
		CAS# EINEC		RE	ACH	C	ONCENTRATIO	ON		
		109-99-9 203-	726-8	Pre-registration			% by Weight 25 - 70	-		
Tetrahydrofuran (THF) Methyl Ethyl Ketone (MEK)			726-8 159-0	05-2116297			25 - 70 5 - 36			
Cyclohexanone				05-2116297			10 - 25			
	s adhesive product are listed									
	subject to the reporting requi al is found on Proposition 65								UCER372).	
SECTION 4 - FIRS										
Contact with eyes:	Flush eyes immediately with	plenty of water for 1	5 minut	es and seek n	nedical advice	immediately.				
Skin contact:	Remove contaminated cloth	ing and shoes. Wash	n skin tł	horoughly with	soap and wa	ter. If irritation				
Inhalation: Ingestion:	Remove to fresh air. If brea Rinse mouth with water. Gi									
Likely Routes of Exposur		e and Skin Contact								
Acute symptoms and effe		out in powers which		oodooba C	oouse deer		of our	nonel no		
Inhalation: Eye Contact:	Severe overexposure may Vapors slightly uncomfortat								-	uid.
Skin Contact:	Liquid contact may remove									
Ingestion:	May cause nausea, vomitin		al sluggi	ishness.						
Chronic (long-term) effect		-								
SECTION 5 - FIREI Suitable Extinguishing	FIGHTING MEASURE	S powder, carbon dioxid	de das	foam Halon	water for		HMIS	NFPA	0-Minimal	
Unsuitable Extinguishin			uu yas,	.oum, naiuil,		Health	2	2	1-Slight	
Exposure Hazards:	Inhalation an	d dermal contact	In c !	make		Flammability	3	3	2-Moderate	
Combustion Products:	Oxides of car	bon, hydrogen chlorid	ie and s	SMOKE		Reactivity PPE	0 B	0	3-Serious 4-Severe	
Protection for Firefighte	ers: Self-containe	d breathing apparatus	s or full-	face positive	pressure airlin		-			
	DENTAL RELEASE N	EASURES								
Personal precautions:		om heat, sparks and c								
		ient ventilation, use e act with skin or eyes (s			st ventilation e	equipment or v	vear suitable	respiratory pi	rotective equipme	ent.
Environmental Precaution	ons: Prevent prod	uct or liquids contamir	nated w	ith product fro				ater course.		
Methods for Cleaning up	Clean up with	sand or other inert at	bsorber	nt material. Ti						
Materials not to be used		Aluminum or plastic o	contain	ers						
	DLING AND STORAG ng of vapor, avoid contact wi		ning							
	om ignition sources, use only			ng equipment	and ensure a	dequate ventil	ation/fume ex	haust hoods.		
Do not eat, di	ink or smoke while handling.			• • •		•				
	lated room or shade below 4 om ignition sources and inco					chlorinated cor	npounds stro	na oxidizere	and isocvanates	
	cautionary information on co								aa 1000yana(63.	
SECTION 8 - PREC	AUTIONS TO CONTI	ROL EXPOSURE	E/PE	RSONAL I	PROTECTI	ON				
						OSHA	CAL/OSHA	CAL/OSHA		
EXPOSURE LIMITS:	Component Tetrahydrofuran (THF)	ACGIH TLV ACGIH 50 ppm 100 p		OSHA PEL 200 ppm	OSHA STEL N/E	PEL-Ceiling N/E	PEL 200 ppm	Ceiling N/E	250 ppm	-
	Methyl Ethyl Ketone (MEK)		ppm ppm	200 ppm 200 ppm	N/E N/E	N/E N/E	200 ppm 200 ppm	N/E N/E	250 ppm 300 ppm	
	Cyclohexanone		ppm	50 ppm	N/E	N/E	25 ppm	N/E	N/E	
Engineering Controls:	Use local exhaust as neede		h -1							
Monitoring: Personal Protective Equ	Maintain breathing zone air ipment (PPE):	porne concentrations	below e	exposure limit	5.					
Eye Protection:	Avoid contact with eyes, we		ical goo	ggles, face shi	eld, safety gla	isses (spectac	les) with brow	guards and	side shields,	
Skin Brotostion-	etc. as may be appropriate		D Dut	rubbor classes	s should be	od for from	timmoreisa			
Skin Protection:	Prevent contact with the ski Use of solvent-resistant glo							nal adhesive	application	
	practices and procedures a	re used for making str	uctural	bonds.						
Respiratory Protection:	Prevent inhalation of the so	Ivents. Use in a well-	ventilat	ed room. Ope	en doors and/o	or windows to	ensure airflow	and air char	nges. Use local	



GHS SAFETY DATA SHEET

WELD-ON® 717[™] Low VOC Cements for PVC Plastic Pipe

Date Revised: APR 2015 Supersedes: NOV 2014

SECTION 9 - PHYS	SICAL AND CHEMIC	AL PROPERTIES			
Appearance:		r, heavy syrupy liquid			
Odor:	Ketone			Odor Threshold:	0.88 ppm (Cyclohexanone)
pH: Melting/Freezing Po	Not Applicat	63.3°F) Based on first melting	a component: THF	Boiling Range:	66°C (151°F) to 156°C (313°F)
Boiling Point:) Based on first boiling comp		Evaporation Rate:	> 1.0 (BUAC = 1)
Flash Point:	-20°C (-4°F)	TCC based on THF		Flammability:	Category 2
Specific Gravity:	0.963 @23°			Flammability Limits:	LEL: 1.1% based on Cyclohexanone
Solubility:		ion soluble in water. Resin po	ortion separates out.	N	UEL: 11.8% based on THF
Partition Coefficient Auto-ignition Tempe		Not Available F) based on THF		Vapor Pressure: Vapor Density:	129 mm Hg @ 20°C (68°F)based on THF >2 (Air = 1)
Decomposition Tem				Other Data: Viscosity:	Heavy bodied
VOC Content:		ed as directed, per SCAQMD	Rule 1168, Test Method 31		
SECTION 10 - STA	BILITY AND REACT	VITY			
Stability:		Stable			
Hazardous decompo					hydrogen chloride and smoke.
Conditions to avoid			ks, open flame and other ig	nition sources.	
Incompatible Materia		Oxidizers, strong acids and	bases, amines, ammonia		
	(ICOLOGICAL INFOR	MATION	LC50		Torget Orgens
Toxicity: Tetrahydrofuran (THF)	D50 Oral: 2842 n	na/ka (rot)		3 hrs. 21,000 mg/m ³ (rat)	Target Organs STOT SE3
Methyl Ethyl Ketone (MEI		ng/kg (rat) ng/kg (rat), Dermal: 6480 mg/		3 hrs. 23,500 mg/m ³ (rat)	STOT SE3
Cyclohexanone	,	ng/kg (rat), Dermal: 948 mg/kg	0 ()	hrs. 8,000 PPM (rat)	3101 323
Reproductive Effects	Teratogenicity	Mutagenicity		Sensitization to Product	Supergiatia Braduata
Not Established	Not Established	Not Established	Embryotoxicity Not Established	Not Established	Synergistic Products Not Established
			Not Established	Hot Established	Not Established
Ecotoxicity:	None Known				
Mobility:		volatile organic compounds ((VOC's) to the air takes place	e typically at a rate of < 51	0 a/l
Degradability:	Not readily biodegradable	volatile erganie competitie (, i j prodiný dr d rato or <u>-</u> o r	e g/n
Bioaccumulation:	Minimal to none.				
Bioaccumulation:		SIDERATIONS			
Bioaccumulation: SECTION 13 - WAS	Minimal to none.				
Bioaccumulation: SECTION 13 - WAS Follow local and national re	Minimal to none. STE DISPOSAL CON	l expert.			
Bioaccumulation: SECTION 13 - WA Follow local and national r SECTION 14 - TRA Proper Shipping Name:	Minimal to none. STE DISPOSAL CON egulations. Consult disposa NSPORT INFORMAT Adhesives	l expert.			
Bioaccumulation: SECTION 13 - WA Follow local and national r SECTION 14 - TRA Proper Shipping Name: Hazard Class:	Minimal to none. STE DISPOSAL CON egulations. Consult disposa NSPORT INFORMAT Adhesives 3	I expert.		ION for Ground Shipping	
Bioaccumulation: SECTION 13 - WA Follow local and national r SECTION 14 - TRA Proper Shipping Name: Hazard Class: Secondary Risk:	Minimal to none. STE DISPOSAL CON egulations. Consult disposa NSPORT INFORMAT Adhesives 3 None	I expert. ION DOT Limited	Quantity: Up to 5L per inn	er packaging, 30 kg gross w	
Bioaccumulation: SECTION 13 - WA Follow local and national r SECTION 14 - TRA Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number:	Minimal to none. STE DISPOSAL CON egulations. Consult disposa NSPORT INFORMAT Adhesives 3 None UN 1133	I expert. ION DOT Limited	Quantity: Up to 5L per inn	er packaging, 30 kg gross w	eight per package. nay qualify under DOT as "ORM-D" .
Bioaccumulation: SECTION 13 - WA Follow local and national r SECTION 14 - TRA Proper Shipping Name: Hazard Class: Secondary Risk:	Minimal to none. STE DISPOSAL CON egulations. Consult disposa NSPORT INFORMAT Adhesives 3 None UN 1133 PG II	I expert. ION DOT Limited	I Quantity: Up to 5L per inn ommodity: Depending on p	er packaging, 30 kg gross w	
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Bioaccumulation: SECTION 13 - WA: Follow local and national r SECTION 14 - TRA Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required:	Minimal to none. STE DISPOSAL CON egulations. Consult disposa NSPORT INFORMAT Adhesives 3 None UN 1133 PG II Class 3 Flar	I expert. ION DOT Limited Consumer C	Quantity: Up to 5L per inn ommodity: Depending on p TDG CLASS: SHIPPING NAME:	er packaging, 30 kg gross w packaging, these quantities r DG INFORMATION FLAMMABLI ADHESIVES	nay qualify under DOT as "ORM-D" .
Bioaccumulation: SECTION 13 - WA: Follow local and national r SECTION 14 - TRA Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant:	Minimal to none. STE DISPOSAL CON egulations. Consult disposa NSPORT INFORMAT Adhesives 3 None UN 1133 PG II Class 3 Flar NO	I expert. ION DOT Limited Consumer C	Quantity: Up to 5L per inn ommodity: Depending on p TDG CLASS:	er packaging, 30 kg gross w packaging, these quantities r DG INFORMATION FLAMMABLI ADHESIVES	nay qualify under DOT as "ORM-D" .
Bioaccumulation: SECTION 13 - WA Follow local and national m SECTION 14 - TRA Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant: SECTION 15 - REC	Minimal to none. STE DISPOSAL CON egulations. Consult disposa NSPORT INFORMAT Adhesives 3 None UN 1133 PG II Class 3 Flar NO BULATORY INFORMA	I expert. ION DOT Limited Consumer C nmable Liquid	Quantity: Up to 5L per inn ommodity: Depending on p TI TDG CLASS: SHIPPING NAME: UN NUMBER/PACKING (er packaging, 30 kg gross w vackaging, these quantities r DG INFORMATION FLAMMABLI ADHESIVES GROUP: UN 1133, PC	may qualify under DOT as "ORM-D" . E LIQUID 3 3 II
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Bioaccumulation: SECTION 13 - WAS Follow local and national r SECTION 14 - TRA Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant: SECTION 15 - REC Precautionary Label Symbols:	Minimal to none. STE DISPOSAL CON egulations. Consult disposa NSPORT INFORMAT Adhesives 3 None UN 1133 PG II Class 3 Flar NO SULATORY INFORM, Information: Highly Flam F, Xi	I expert. ION DOT Limited Consumer C nmable Liquid	Quantity: Up to 5L per inn ommodity: Depending on p TDG CLASS: SHIPPING NAME: UN NUMBER/PACKING O Ingredient Listings: USA	er packaging, 30 kg gross w vackaging, these quantities r DG INFORMATION FLAMMABLI ADHESIVES GROUP: UN 1133, PC	E LIQUID 3 B II
Bioaccumulation: SECTION 13 - WA Follow local and national r SECTION 14 - TRA Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant: SECTION 15 - REC Precautionary Label	Minimal to none. STE DISPOSAL CON egulations. Consult disposa NSPORT INFORMAT Adhesives 3 None UN 1133 PG II Class 3 Flar NO SULATORY INFORM. Information: Highly Flam	I expert. ION DOT Limited Consumer C nmable Liquid	Quantity: Up to 5L per inn ommodity: Depending on p TDG CLASS: SHIPPING NAME: UN NUMBER/PACKING (Ingredient Listings: USA AICS, K	er packaging, 30 kg gross w packaging, these quantities r DG INFORMATION FLAMMABLI ADHESIVES GROUP: UN 1133, PC TSCA, Europe EINECS, Car	nay qualify under DOT as "ORM-D" . E LIQUID 3 3 II nada DSL, Australia I (ENCS)
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Bioaccumulation: SECTION 13 - WA3 Follow local and national r SECTION 14 - TRA Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant: SECTION 15 - REC Precautionary Label Symbols: Risk Phrases: Safety Phrases: Safety Phrases: SecTION 16 - OTH Specification Inform Department issuing	Minimal to none. STE DISPOSAL CON egulations. Consult disposa NSPORT INFORMAT Adhesives 3 None UN 1133 PG II Class 3 Flar NO SULATORY INFORM. Information: Highly Flam F, Xi R11: Highly flammable. R20: Harmful by inhalation. R36/37: Irritating to eyes and S9: Keep container in a well S16: Keep away from source S25: Avoid contact with eyes HER INFORMATION Mation: data sheet:	I expert. ION DOT Limited Consumer C nmable Liquid ATION mable, Irritant, Carc. Cat. 2 d respiratory system. -ventilated place. so of ignition - No smoking. s. IPS, Safety Health & Enviro <ehsinfo@ipscorp.com></ehsinfo@ipscorp.com>	Quantity: Up to 5L per inn ommodity: Depending on p TI TDG CLASS: SHIPPING NAME: UN NUMBER/PACKING (Ingredient Listings: USA AICS, K R66: Repeat R67: Vapors S26: In case of contact with S33: Take precautionary m S46: If swallowed, seek me	er packaging, 30 kg gross w packaging, these quantities of Conformation FLAMMABLI ADHESIVES GROUP: UN 1133, PC TSCA, Europe EINECS, Car orea ECL/TCCL, Japan MIT ed exposure may cause skin of may cause drowsiness and di eyes, rinse immediately with p pasures against static discharg dical advise immediately and s All ingredients are complia Directive on RoHS (Restri	The second secon

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.



ECTION I - PROD RODUCT NAME: RODUCT USE: UPPLIER:	W		•• •.		DATA SH				Data Data 1	ADD 2015	
RODUCT NAME: RODUCT USE:		ELD-ON® P	-68™ Low	VOC Prim	er for PVC	and CPVC	Plastic Pi	ре	Date Revised: Supersedes:		
RODUCT USE:	UCT AND C	OMPANY II	DENTIFICA	TION							
		P-68™ Low V imer for PVC ar			VC Plastic Pip	De					
	LOW VOC FI		iu CF VC Flast		ACTURER:	IPS Corporat	ion				
							Main Street, G , Gardena, CA				
		T-1 000 055 (004 .4 040 0	40.0505 (lata		Tel. 1-310-89	8-3300				
MERGENCY: Transporta ECTION 2 - HAZA				48-0585 (Intel	rnational)	Medical: CH	EMIEL Tel. 80	0.255-3924,	+1 813-248-0:	585 (International)	
HS CLASSIFICATION:							r				
H cute Toxicity:	ealth Category 4		Acute Toxicity		nmental None Known		Flammable Lie		nysical	Category 2	
kin Irritation:	Category 3		Chronic Toxic		None Known			1010		Oulogory 2	
kin Sensitization: /e:	NO Category 2										
HS LABEL:				Signal Word:			WHMIS CLASS	FICATION:	CLASS B, DI	IVISION 2	
	<u>()</u>			Danger					CLASS D, D		
	Hazard S	Statements					Precautiona	ry Statement	s		
225: Highly flammable liquid	-	latements			P210: Keep aw	ay from heat/sp	arks/open flames				
319: Causes serious eye irrita 332: Harmful if inhaled	ation						ne/gas/mist/vapor				
332: Harmrui ir innaied 335: May cause respiratory ir	ritation						rotective clothing love victim to free			ition comfortable for b	reathin
336: May cause drowsiness of							ntilated place. Ke				
51: Suspected of causing ca JH019: May form explosive p					P501: Dispose	of contents/cont	ainer in accordar	nce with local	egulation		
ECTION 3 - COM		NFORMATI									
			CAS#	EINECS #	REA Pre-registratio			NCENTRATI % by Weight			
etrahydrofuran (THF)			109-99-9	203-726-8	05-21162977	29-22-0000		20 - 35	-		
ethyl Ethyl Ketone (MEK) yclohexanone			78-93-3 108-94-1	201-159-0 203-631-1	05-21162977 05-21162977			15 - 25 10 - 30			
cetone			67-64-1		05-21162977			25 - 40			
Il of the constituents of th											
Indicates this chemical is indicates that this chemic										GFR372).	
ECTION 4 - FIRS	T AID MEAS	SURES							-		
Contact with eyes:		nmediately with						develope or	مار معمانهما مر	huine	
Skin contact: Inhalation:		taminated cloth resh air. If brea									
Ingestion:	Rinse mouth	with water. Giv	ve 1 or 2 glass	es of water or							
ikely Routes of Exposur cute symptoms and effe		Inhalation, Eye	e and Skin Cor	itact							
Inhalation:		exposure may re	esult in nausea	ı, dizziness, h [,]	eadache. Can	cause drows	iness, irritation	of eyes and	nasal passage	es.	
Eye Contact:										tact with the liquid.	
Skin Contact: Ingestion:		ct may remove r ausea, vomiting				Dermatitis ma	y occur with pr	olonged cont	act.		
hronic (long-term) effec	,	Category 2 Ca		memai siuggi	131111033.						
ECTION 5 - FIREI											
		Dry chemical Water spray o		1 dioxide gas,	foam, Halon,			HMIS	NFPA		
Suitable Extinguishing		Inhalation and				water fog.	Hoolth	2	2	0-Minimal	
	•			rt 🛛		water fog.	Health Flammability	2 3	2 3	0-Minimal 1-Slight 2-Moderate	
Suitable Extinguishing Unsuitable Extinguishir Exposure Hazards:		Oxides of carb	oon and smoke			water fog.	Flammability Reactivity	3 0		1-Slight 2-Moderate 3-Serious	
Suitable Extinguishing Unsuitable Extinguishir Exposure Hazards: Combustion Products:	-		oon and smoke I breathing app)	face positive p		Flammability Reactivity PPE	3	3	1-Slight 2-Moderate	
Suitable Extinguishing Unsuitable Extinguishin Exposure Hazards: Combustion Products: Protection for Firefighte ECTION 6 - ACCI	ers:	Self-contained	breathing app	e paratus or full-			Flammability Reactivity PPE	3 0	3	1-Slight 2-Moderate 3-Serious	
Suitable Extinguishing Unsuitable Extinguishir	ers:	Self-contained ELEASE ME Keep away fro	breathing app EASURES om heat, spark	paratus or full- s and open fla	ime.	pressure airline	Flammability Reactivity PPE e masks.	3 0 B	3 0	1-Slight 2-Moderate 3-Serious 4-Severe	
Suitable Extinguishing Unsuitable Extinguishin Exposure Hazards: Combustion Products: Protection for Firefighte ECTION 6 - ACCI Personal precautions:	ers: DENTAL RE	Self-contained ELEASE ME Keep away fro Provide suffici Prevent conta	breathing app ASURES om heat, spark ent ventilation, ct with skin or	oaratus or full- s and open fla , use explosion eyes (see sec	ime. n-proof exhaus ction 8).	oressure airline	Flammability Reactivity PPE e masks.	3 0 B ear suitable	3 0 respiratory pro	1-Slight 2-Moderate 3-Serious	
Suitable Extinguishing Unsuitable Extinguishin Exposure Hazards: Combustion Products: Protection for Firefighte ECTION 6 - ACCI Personal precautions: Environmental Precautio	ons:	Self-contained ELEASE ME Keep away fro Provide suffici Prevent conta Prevent produ	d breathing app ASURES om heat, spark ent ventilation, ct with skin or ict or liquids cc	e paratus or full- s and open fla , use explosion eyes (see sec ontaminated w	ime. n-proof exhaus tion 8). ith product fro	oressure airline st ventilation e m entering se	Flammability Reactivity PPE e masks. equipment or w wers, drains, se	3 0 B ear suitable pil or open w	3 0 respiratory pro	1-Slight 2-Moderate 3-Serious 4-Severe	
Suitable Extinguishing Unsuitable Extinguishin Exposure Hazards: Combustion Products: Protection for Firefighte ECTION 6 - ACCI Versonal precautions: Environmental Precaution fethods for Cleaning up	ers: DENTAL RE DONS: DONS:	Self-contained ELEASE ME Keep away fro Provide suffici Prevent conta Prevent produ	d breathing app ASURES om heat, spark ent ventilation, ct with skin or ict or liquids cc	e paratus or full- s and open fla , use explosion eyes (see sec ontaminated w inert absorber	ime. n-proof exhaus tion 8). ith product fro nt material. Tr	oressure airline st ventilation e m entering se	Flammability Reactivity PPE e masks.	3 0 B ear suitable pil or open w	3 0 respiratory pro	1-Slight 2-Moderate 3-Serious 4-Severe	
Suitable Extinguishing Unsuitable Extinguishin Exposure Hazards: Combustion Products: Protection for Firefighte ECTION 6 - ACCI Personal precautions: Environmental Precauti Methods for Cleaning up Materials not to be used ECTION 7 - HANI	ons: c: for clean up: DLING AND	Self-contained ELEASE ME Keep away fro Provide suffici Prevent conta Prevent produ Clean up with STORAGE	A breathing app EASURES om heat, spark: ent ventilation, ct with skin or ct or liquids cc sand or other Aluminum or p	e paratus or full- s and open fla , use explosion eyes (see sec ontaminated w inert absorber plastic contain	ime. n-proof exhaus tion 8). ith product fro nt material. Tr	oressure airline st ventilation e m entering se	Flammability Reactivity PPE e masks. equipment or w wers, drains, se	3 0 B ear suitable pil or open w	3 0 respiratory pro	1-Slight 2-Moderate 3-Serious 4-Severe	
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GHS SAFETY DATA SHEET

WELD-ON® P-68[™] Low VOC Primer for PVC and CPVC Plastic Pipe

SECTION 9 - PHYS	ICAL AND	CHEMICAL	PROPERTIES			
Appearance:		Clear or purple				
Odor:		Ethereal	e, unin ilquiu		Odor Threshold:	0.88 ppm (Cyclohexanone)
pH:		Not Applicable	`		Guor Threandu.	0.00 ppm (Oycionexanoile)
Melting/Freezing Poir	nt:		, 3.3°F) Based on first meltir	a component. THE	Boiling Range:	56°C (133°F) to 156°C (313°F)
Boiling Point:			Based on first boiling comp		Evaporation Rate:	> 1.0 (BUAC = 1)
Flash Point:			CC based on Acetone		Flammability:	Category 2
Specific Gravity:		0.842 @23°C			Flammability Limits:	LEL: 1.1% based on Cyclohexar
Solubility:			n soluble in water. Resin p	portion separates out	Fighting Links.	UEL: 12.8% based on Acetone
Partition Coefficient	n-octanol/wa		Not Available	ontion separates out.	Vapor Pressure:	190 mm Hg @ 20°C (68°F) Acete
Auto-ignition Temper			based on THF		Vapor Density:	>2.0 (Air = 1)
Decomposition Temp		Not Applicable			Other Data: Viscosity:	Water-thin
VOC Content:	of at a f			Rule 1168 Test Method	316A,VOC content is: < 550 g/l.	
						•
SECTION 10 - STAI	BILITY AN	DREACTIVI				
Stability:			Stable			
Hazardous decompos	sition produc	ts:			luct gives off oxides of carbon a	and smoke.
Conditions to avoid:			Keep away from heat, spa	arks, open flame and other	ignition sources.	
Incompatible Materia	ls:		Oxidizers, strong acids an	d bases, amines, ammoni	a	
SECTION 11 - TOX	ICOLOGIC	AL INFORM	ATION			
Toxicity:		LD50		LC50		Target Organs
•			//r.a. (r.o.t.)		a 2 hm 21 000 (3 (1)	Target Organs
Tetrahydrofuran (THF)	0	Oral: 2842 mg			n 3 hrs. 21,000 mg/m ³ (rat)	STOT SE3
Methyl Ethyl Ketone (MEK	.)		/kg (rat), Dermal: 6480 mg		n 8 hrs. 23,500 mg/m ³ (rat)	STOT SE3
Cyclohexanone			/kg (rat), Dermal: 948 mg/		n 4 hrs. 8,000 PPM (rat)	
Acetone		Oral: 5800 mg	ı/kg (rat)	Inhalatio	n 50,100 mg/m ³ (rat)	STOT SE3
Reproductive Effects	Terat	ogenicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products
Not Established		stablished	Not Established	Not Established	Not Established	Not Established
SECTION 12 - ECO		INFORMATI	ON			
Ecotoxicity: Mobility: Degradability: Bioaccumulation:	Not available Minimal to n	se, emission of v e ione.	olatile organic compounds	(VOC's) to the air takes p	lace, typically at a rate of \leq 550	0 g/l.
Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS	In normal us Not availabl Minimal to n	se, emission of v e none. SAL CONSI	olatile organic compounds	(VOC's) to the air takes p	lace, typically at a rate of \leq 550) g/l.
Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS Follow local and national re	In normal us Not availabl Minimal to n STE DISPO sgulations. Co	se, emission of v e none. DSAL CONSI onsult disposal e	olatile organic compounds DERATIONS xpert.	(VOC's) to the air takes p	lace, typically at a rate of \leq 550) g/l.
Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS Follow local and national re SECTION 14 - TRAN	In normal us Not availabl Minimal to n STE DISPO sgulations. Co	se, emission of v e ione. DSAL CONSI onsult disposal e NFORMATIO	olatile organic compounds DERATIONS xpert. N	· · · ·	lace, typically at a rate of \leq 550) g/l.
Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS Follow local and national re SECTION 14 - TRAN Proper Shipping Name:	In normal us Not availabl Minimal to n STE DISPO sgulations. Co	se, emission of v e ione. DSAL CONSI onsult disposal e NFORMATIO Flammable Lie	olatile organic compounds DERATIONS xpert.	· · · ·	lace, typically at a rate of \leq 550) g/l.
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Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS Follow local and national re SECTION 14 - TRAN Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required:	In normal us Not availabl Minimal to n STE DISPO sgulations. Co	se, emission of v e bone. SAL CONSI onsult disposal e: FORMATIO Flammable Lia 3 None UN 1993 PG II Class 3 Flamm	olatile organic compounds DERATIONS xpert. N quid, n.o.s. (Acetone, Tetra DOT Limite Consumer (ahydrofuran) d Quantity: Up to 1L per i	EXCEPTION for Ground Ship nner packaging, 30 kg gross w	p ping eight per package.
Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS Follow local and national re SECTION 14 - TRAN Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group:	In normal us Not availabl Minimal to n STE DISPO sgulations. Co	se, emission of v e ione. SAL CONSI onsult disposal e: Flammable Lie 3 None UN 1993 PG II	olatile organic compounds DERATIONS xpert. N quid, n.o.s. (Acetone, Tetra DOT Limite Consumer (ahydrofuran) d Quantity: Up to 1L per Commodity: Depending c	EXCEPTION for Ground Ship nner packaging, 30 kg gross w n packaging, these quantities n	p ping eight per package.
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Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS Follow local and national re SECTION 14 - TRAN Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required:	In normal us Not availabl Minimal to n STE DISPO sgulations. Co	se, emission of v e bone. SSAL CONSI SSAL CONSI SSAL CONSI SSAL CONSI SSAL CONSI SSAL CONSI SSAL CONSI Flammable Lik 3 None UN 1993 PG II Class 3 Flamm NO TDG CLASS: SHIPPING NA	olatile organic compounds DERATIONS xpert. N quid, n.o.s. (Acetone, Tetra quid, n.o.s. (Acetone, Tetra DOT Limite Consumer of Consumer of C	ahydrofuran) d Quantity: Up to 1L per i Commodity: Depending o TDG INFORI FLAMMABLE LIQUID 3	EXCEPTION for Ground Ship nner packaging, 30 kg gross we n packaging, these quantities n	p ping eight per package.
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Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS Follow local and national re SECTION 14 - TRAN Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant: SECTION 15 - REG	In normal us Not availabl Minimal to n STE DISPO gulations. Cc NSPORT IN	se, emission of v e ione. ISAL CONSI INSAL CONSI INSAL CONSI INSAL CONSI INSAL CONSI INSAL CONSI INSAL CONSIST INFORMAT	olatile organic compounds DERATIONS xpert. N quid, n.o.s. (Acetone, Tetra DOT Limite Consumer of nable Liquid ME: PACKING GROUP: TON	ahydrofuran) d Quantity: Up to 1L per i Commodity: Depending o TDG INFORI FLAMMABLE LIQUID 3 Flammable Liquid, n.o. UN 1993, PG II Ingredient Listings: US	EXCEPTION for Ground Ship nner packaging, 30 kg gross w n packaging, these quantities n MATION s. (Acetone, Tetrahydrofuran)	pping eight per package. nay qualify under DOT as "ORM-D
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Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS Follow local and national re SECTION 14 - TRAM Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant: SECTION 15 - REG Precautionary Label I Symbols: Risk Phrases: Safety Phrases: Section 16 - OTH Specification Informa Department issuing of	In normal us Not availabl Minimal to m Ggulations. Co NSPORT IN NSPORT IN NSPORT IN NSPORT IN NSPORT IN NSPORT IN SP Keep cor S16: Keep as S25: Avoid c ER INFOR Ation:	se, emission of v e bone. SSAL CONSI Insult disposal e. VFORMATIO Flammable Lid 3 None UN 1993 PG II Class 3 Flamm NO TDG CLASS: SHIPPING NA UN NUMBER/ / INFORMAT Insultation. ting to eyes and r tatiner in a well-veck.	olatile organic compounds DERATIONS xpert. N Quid, n.o.s. (Acetone, Tetra DOT Limite Consumer of nable Liquid ME: PACKING GROUP: TON able, Irritant, Carc. Cat. 2 espiratory system. antilated place. of ignition - No smoking. IPS, Safety Health & Envir	ahydrofuran) d Quantity: Up to 1L per i Commodity: Depending of TDG INFORI FLAMMABLE LIQUID 3 Flammable Liquid, n.o. UN 1993, PG II Ingredient Listings: US R66: Rep R67: Vap S26: In case of contact w S33: Take precautionary S46: If swallowed, seek r	EXCEPTION for Ground Ship nner packaging, 30 kg gross w n packaging, these quantities n MATION s. (Acetone, Tetrahydrofuran) A TSCA, Europe EINECS, Can , Korea ECL/TCCL, Japan MITI eated exposure may cause skin dr rs may cause drowsiness and diz tith eyes, rinse immediately with pl measures against static discharge nedical advise immediately and st All ingredients are complia	pping eight per package. nay qualify under DOT as "ORM-D ada DSL, Australia (ENCS) yness or cracking ziness lenty of water and seek medical advi as. now this container or label.
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Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS Follow local and national re SECTION 14 - TRAM Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant: SECTION 15 - REG Precautionary Label I Symbols: Risk Phrases: Safety Phrases: Section 16 - OTH Specification Informa Department issuing of	In normal us Not availabl Minimal to m Ggulations. Co NSPORT IN NSPORT IN NSPORT IN NSPORT IN NSPORT IN NSPORT IN SP Keep cor S16: Keep as S25: Avoid c ER INFOR Ation:	se, emission of v e bone. SSAL CONSI Insult disposal e. VFORMATIO Flammable Lid 3 None UN 1993 PG II Class 3 Flamr NO TDG CLASS: SHIPPING NA UN NUMBER' VINFORMAT Highly Flamm. F, Xi Hammable. I by inhalation. thig to eyes and r ntainer in a well-vu- way from sources ontact with eyes. IMATION	olatile organic compounds DERATIONS xpert. N Quid, n.o.s. (Acetone, Tetra DOT Limite Consumer of nable Liquid ME: PACKING GROUP: TON able, Irritant, Carc. Cat. 2 espiratory system. antilated place. of ignition - No smoking. IPS, Safety Health & Envir	ahydrofuran) d Quantity: Up to 1L per i Commodity: Depending of TDG INFORI FLAMMABLE LIQUID 3 Flammable Liquid, n.o. UN 1993, PG II Ingredient Listings: US AICS R66: Repr R67: Vapo S26: In case of contact w S33: Take precautionary S46: If swallowed, seek r ronmental Affairs	EXCEPTION for Ground Ship nner packaging, 30 kg gross we n packaging, these quantities n MATION s. (Acetone, Tetrahydrofuran) A TSCA, Europe EINECS, Can , Korea ECL/TCCL, Japan MITI eated exposure may cause skin dr rs may cause drowsiness and diz tith eyes, rinse giamstiated ly with p measures against static discharge nedical advise immediately and st All ingredients are complia Directive on RoHS (Restric	pping eight per package. nay qualify under DOT as "ORM-D ada DSL, Australia (ENCS) yness or cracking ziness lenty of water and seek medical advi as. now this container or label.

Intended Use of Product: 4/17/2015/ Opdated GHS Standard For Primer for PVC and CPVC Plastic Pipe

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.



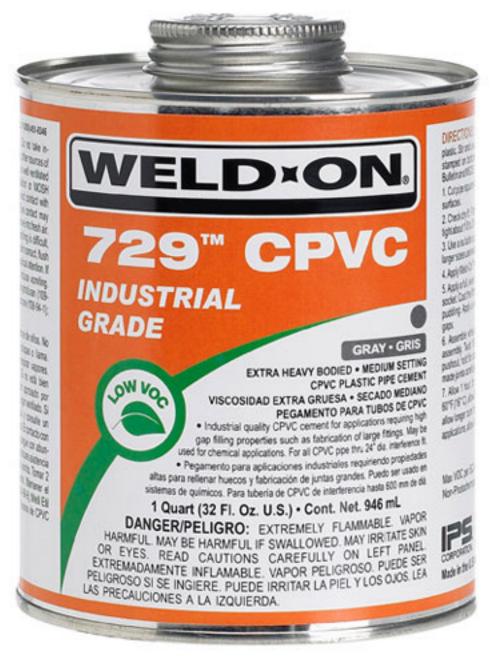
	WEL										
SECTION I - PRO	DUCT AND C	OMPANY I	DENTIFIC	ATION							
RODUCT NAME:					r CPVC Plast	c Pipe					
PRODUCT USE: SUPPLIER:	Low VOC So	lvent Cement fo	or CPVC Plast		CTURER:		Main Street, G , Gardena, CA				
EMERGENCY: Transpo	ortation: CHEMTE	L Tel. 800.255-	3924, +1 813-2	248-0585 (Inter	national)			0.255-3924,	+1 813-248-	-0585 (Internatio	nal)
SECTION 2 - HA	ZARDS IDEN				,						,
SHS CLASSIFICATION	N: Health			Environ	mental			Ph	iysical		
Acute Toxicity:	Category 4		Acute Toxicity		None Known		Flammable Li		lyoloui	Category 2	
Skin Irritation: Skin Sensitization:	Category 3 NO		Chronic Toxici	ity:	None Known						
Eye:	Category 2										
HS LABEL:	$\wedge \wedge$			Signal Word:			WHMIS CLASS	IFICATION:	CLASS B, I	DIVISION 2	
				Danger					CLASS D, I	DIVISION 2B	
	Hazard	Statements					Precautiona	ry Statement	<u>s</u>		
1225: Highly flammable liqui							arks/open flames/		No smoking		
H319: Causes serious eye ir H226: Flammable liquid and							e/gas/mist/vapors rotective clothing/		ace protection		
1332: Harmful if inhaled					P304+P340: IF	INHALED: Rem	ove victim to fres			tion comfortable for	breathing
H335: May cause respiratory H336: May cause drowsines						t medical advice		n container tick	thy closed		
H336: May cause drowsines H351: Suspected of causing							tilated place. Kee tilated place. Kee				
EUH019: May form explosive	e peroxides						ainer in accordance	-			
UH066: Repeated exposu					6						
SECTION 3 - CO	WP03IIIUN/		CAS#	EINECS #	REA		C	ONCENTRATIO			
Fetrahydrofuran (THF)		-	109-99-9	203-726-8	Pre-registratio 05-21162977			% by Weight 30 - 40	-		
Methyl Ethyl Ketone (Mi	EK)		78-93-3	201-159-0	05-21162977			15 - 25			
Cyclohexanone			108-94-1	203-631-1	05-21162977			10 - 18			
All of the constituents of Indicates this chemica											
indicates that this che			ements of Sec								
		100000000000000000000000000000000000000	s List of chemi							00FR372).	
SECTION 4 - FIR	ST AID MEAS	•	s List of chemi							UCFR372).	
Contact with eyes:	Flush eyes in	SURES	plenty of wate	cals known to t	he State of Ca s and seek me	lifornia to cau dical advice i	se cancer or re mmediately.	eproductive to	oxicity.		
Contact with eyes: Skin contact:	Flush eyes in Remove cont	SURES nmediately with taminated clothi	plenty of wate	cals known to t r for 15 minute . Wash skin th	he State of Ca s and seek me oroughly with s	lifornia to cau dical advice in soap and wate	se cancer or re mmediately. er. If irritation of	eproductive to	ek medical ad	dvice.	
Contact with eyes:	Flush eyes in Remove con Remove to fr	SURES	plenty of wate ing and shoes. thing is stoppe	cals known to t or for 15 minute . Wash skin the ed, give artificia	he State of Ca s and seek me oroughly with s I respiration. It	lifornia to cau dical advice is soap and wate breathing is	se cancer or re mmediately. er. If irritation of difficult, give of	eproductive to levelops, see kygen. Seek	ek medical adv	dvice.	
Contact with eyes: Skin contact: Inhalation: Ingestion: Likely Routes of Expo	Flush eyes in Remove con Remove to fr Rinse mouth sure:	SURES nmediately with taminated clothi esh air. If brea	plenty of wate ing and shoes. thing is stoppe /e 1 or 2 glass	r for 15 minute Wash skin the d, give artificia es of water or r	he State of Ca s and seek me oroughly with s I respiration. It	lifornia to cau dical advice is soap and wate breathing is	se cancer or re mmediately. er. If irritation of difficult, give of	eproductive to levelops, see kygen. Seek	ek medical adv	dvice.	
Contact with eyes: Skin contact: Inhalation: Ingestion: Likely Routes of Expo Acute symptoms and	Flush eyes in Remove con Remove to fr Rinse mouth sure: effects:	SURES nmediately with taminated clothi esh air. If brea with water. Giv Inhalation, Eye	plenty of wate ing and shoes, thing is stoppe ve 1 or 2 glass e and Skin Cor	cals known to t r for 15 minute . Wash skin th d, give artificia es of water or r ntact	he State of Ca s and seek me oroughly with s I respiration. I nilk to dilute. I	lifornia to cau dical advice ii soap and wate i breathing is Do not induce	mmediately. r. If irritation of difficult, give of vomiting. See	eproductive to levelops, see kygen. Seek k medical ad	ek medical adv medical adv vice immedia	dvice. rice. ately.	
Contact with eyes: Skin contact: Inhalation: Ingestion: Likely Routes of Expo	Flush eyes in Remove con Remove to fr Rinse mouth sure: effects: Severe overe	SURES mmediately with taminated clothi esh air. If brear with water. Giv Inhalation, Eye	plenty of wate ing and shoes, thing is stoppe ve 1 or 2 glass a and Skin Cor esult in nausea	cals known to t r for 15 minute . Wash skin th d, give artificia es of water or r ntact a, dizziness, he	he State of Ca s and seek me oroughly with s I respiration. I nilk to dilute. I adache. Can	lifornia to cau dical advice i soap and wate breathing is Do not induce cause drowsi	mmediately. r. If irritation of difficult, give of vomiting. See	eproductive to develops, see xygen. Seek k medical ad of eyes and r	ek medical ad medical adv vice immedia	dvice. rice. ately.	iid.
Contact with eyes: Skin contact: Inhalation: Ingestion: Likely Routes of Expo Acute symptoms and Inhalation: Eye Contact: Skin Contact:	Flush eyes in Remove con Remove to fr Rinse mouth sure: effects: Severe overe Vapors slight Liquid contac	SURES nmediately with taminated clothi esh air. If brea with water. Giv Inhalation, Eye exposure may re ly uncomfortable t may remove r	plenty of wate ing and shoes. thing is stoppe re 1 or 2 glass a and Skin Cor esult in nausea le. Overexpos natural skin oils	r for 15 minute with the second second second with the second second second second second second second second second second second second second second second second second second second second second second second sec	he State of Ca s and seek me oroughly with s I respiration. I milk to dilute. I adache. Can in severe eye in irritation. D	lifornia to cau dical advice in soap and wate breathing is a Do not induce cause drowsii injury with con	mmediately. ar. If irritation of difficult, give of vomiting. See ness, irritation rneal or conjun	eproductive to levelops, see kygen. Seek k medical ad of eyes and r ctival inflamn	exicity. ex medical act medical adv vice immedia masal passagen nation on con	dvice. vice. ately. ges.	iid.
Contact with eyes: Skin contact: Inhalation: Ingestion: Likely Routes of Expo Acute symptoms and Inhalation: Eye Contact: Skin Contact: Ingestion:	Flush eyes in Remove conin Remove to fr Rinse mouth sure: effects: Severe overe Vapors slight Liquid contac May cause n	SURES mmediately with taminated clothi esh air. If brear with water. Giv Inhalation, Eye exposure may m ly uncomfortabl	plenty of wate ing and shoes, thing is stoppe re 1 or 2 glass a and Skin Cor esult in nausea e. Overexpos natural skin oils g, diarrhea and	r for 15 minute with the second second second with the second second second second second second second second second second second second second second second second second second second second second second second sec	he State of Ca s and seek me oroughly with s I respiration. I milk to dilute. I adache. Can in severe eye in irritation. D	lifornia to cau dical advice in soap and wate breathing is a Do not induce cause drowsii injury with con	mmediately. ar. If irritation of difficult, give of vomiting. See ness, irritation rneal or conjun	eproductive to levelops, see kygen. Seek k medical ad of eyes and r ctival inflamn	exicity. ex medical act medical adv vice immedia masal passagen nation on con	dvice. vice. ately. ges.	iid.
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WELD×ON **GHS SAFETY DATA SHEET** Date Revised: APR 2015 WELD-ON FLOWGUARD GOLD[®] Low VOC Cement for CPVC Plastic Pipe Supersedes: NOV 2014 SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES Appearance: Odor: Yellow, medium syrupy liquid Ketone Odor Threshold: 0.88 ppm (Cyclohexanone) pH: Melting/Freezing Point: Not Applicable -108.5°C (-163.3°F) Based on first melting component: THF 66°C (151°F) Based on first boiling component: THF 66°C (151°F) to 156°C (313°F) Boiling Range: > 1.0 (BUAC = 1) Evaporation Rate: Flammability: Flash Point: -20°C (-4°F) TCC based on THF Category 2 LEL: 1.1% based on Cyclohexanone UEL: 11.8% based on THF Specific Gravity: 0.986 @23°C (73°F) Flammability Limits: Solvent portion soluble in water. Resin portion separates out. Solubility: Partition Coefficient n-octanol/water: Not Available Vapor Pressure: 129 mm Hg @ 20°C (68°F)based on THF Auto-ignition Temperature: 321°C (610°F) based on THF Vapor Density: >2 (Air = 1) Decomposition Temperature: Not Applicable Other Data: Viscosity: Medium bodied VOC Content: When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: < 490 g/l SECTION 10 - STABILITY AND REACTIVITY Stability: Stable Hazardous decomposition products: None in normal use. When forced to burn, this product gives off oxides of carbon, hydrogen chloride and smoke. Conditions to avoid: Keep away from heat, sparks, open flame and other ignition sources Incompatible Materials Oxidizers, strong acids and bases, amines, ammonia SECTION 11 - TOXICOLOGICAL INFORMATION Toxicity: LD₅₀ LC₅₀ Target Organs Tetrahydrofuran (THF) Oral: 2842 mg/kg (rat) Inhalation 3 hrs. 21,000 mg/m3 (rat) STOT SE3 Methyl Ethyl Ketone (MEK) Oral: 2737 mg/kg (rat), Dermal: 6480 mg/kg (rabbit) Inhalation 8 hrs. 23,500 mg/m3 (rat) STOT SE3 Cvclohexanone Oral: 1535 mg/kg (rat), Dermal: 948 mg/kg (rabbit) Inhalation 4 hrs. 8.000 PPM (rat) Synergistic Products **Reproductive Effects** Sensitization to Product Teratogenicity Mutagenicity Embryotoxicity Not Established Not Established Not Established Not Established Not Established Not Establishe SECTION 12 - ECOLOGICAL INFORMATION Ecotoxicity: None Known Mobility: In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of < 490 g/l. Degradability: Not readily biodegradable **Bioaccumulation:** Minimal to none SECTION 13 - WASTE DISPOSAL CONSIDERATIONS Follow local and national regulations. Consult disposal expert SECTION 14 - TRANSPORT INFORMATION Proper Shipping Name: Adhesives EXCEPTION for Ground Shipping DOT Limited Quantity: Up to 5L per inner packaging, 30 kg gross weight per package Hazard Class: 3 Secondary Risk: None Identification Number: UN 1133 Consumer Commodity: Depending on packaging, these quantities may qualify under DOT as "ORM-D" Packing Group: PG II Label Required: Class 3 Flammable Liquid TDG INFORMATION TDG CLASS FLAMMABLE LIQUID 3 Marine Pollutant: NO SHIPPING NAME ADHESIVES UN NUMBER/PACKING GROUP UN 1133, PG SECTION 15 - REGULATORY INFORMATION Precautionary Label Information: Highly Flammable, Irritant, Carc. Cat. 2 Ingredient Listings: USA TSCA, Europe EINECS, Canada DSL, Australia Symbols: F. Xi AICS, Korea ECL/TCCL, Japan MITI (ENCS) Risk Phrases: R36/37: Irritating to eyes and respiratory system. R11: Highly flammable R19: May form explosive peroxide R66: Repeated exposure may cause skin dryness or cracking

R20: Harmful by inhalation. R67: Vapors may cause drowsiness and dizziness Safety Phrases: S2: Keep out of the reach of children S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S9: Keep container in a well-ventilated place. S29: Do not empty into drains. S16: Keep away from sources of ignition - No smoking. S33: Take precautionary measures against static discharges. S25: Avoid contact with eyes S46: If swallowed, seek medical advise immediately and show this container or label SECTION 16 - OTHER INFORMATION Specification Information: Department issuing data sheet: IPS. Safety Health & Environmental Affairs All ingredients are compliant with the requirements of the European E-mail address: <EHSinfo@ipscorp.com> Directive on RoHS (Restriction of Hazardous Substances). Training necessary: Yes, training in practices and procedures contained in product literature Reissue date / reason for reissue: 4/8/2015 / Updated GHS Standard Format

Intended Use of Product: Solvent Cement for CPVC Plastic Pipe

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.





GHS SAFETY DATA SHEET

WELD-ON® 729[™] Low VOC Cement for CPVC Plastic Pipe

Date Revised: APR 2015 Supersedes: NOV 2014

	ICT AND COMPANY		TION							
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PRODUCT NAME:	WELD-ON® 729™ Low V			ripe						
PRODUCT USE:	Low VOC Solvent Cement	for CPVC Plastic	•							
SUPPLIER:			MANUFA	CTURER:	IPS Corporat			00040 0407		
						Main Street, G , Gardena, CA	,			
					Tel. 1-310-89			~		
EMERGENCY: Transportat	ion: CHEMTEL Tel. 800.255	5-3924, +1 813-24	8-0585 (Intern	ational)			0.255-3924,	+1 813-248-0	0585 (Internation	al)
	RDS IDENTIFICATIO			,						
GHS CLASSIFICATION:										
	alth		Environr					nysical		
Acute Toxicity:	Category 4	Acute Toxicity:		None Knowr		Flammable Li	quid		Category 2	
Skin Irritation: Skin Sensitization:	Category 3 NO	Chronic Toxicity		None Knowr						
Eye:	Category 2									
GHS LABEL:			Signal Word:			WHMIS CLASS		CLASS B, D	IVISION 2	
			Danger					CLASS D, D		
			-	-						
	Hazard Statements			D040. K	···· 6···· 1··· • 1/···		ry Statement	_		
H225: Highly flammable liquid a H319: Causes serious eye irrita						arks/open flames ne/gas/mist/vapo		No smoking		
H335: May cause respiratory irri					-	protective clothing		n/face protection	n	
H336: May cause drowsiness or					et medical advic					
H351: Suspected of causing car						ntilated place. Ke				
EUH019: May form explosive pe		ng		P501: Dispose	of contents/cont	tainer in accorda	nce with local re	egulation		
EUH066: Repeated exposure n	POSITION/INFORMA			\$						
	CONTON/INFORMA		EINECS #		ACH	C	ONCENTRATIO	ON		
				Pre-registration	on Number		% by Weight			
Tetrahydrofuran (THF) Methyl Ethyl Ketone (MEK)		109-99-9 78-93-3	203-726-8 201-159-0	05-2116297			50 - 70 2 - 10			
Cyclohexanone		108-94-1	201-159-0 203-631-1	05-2116297			2 - 10 5 - 15			
•	s adhesive product are liste	d on the TSCA inv	entory of cher	nical substan	ces maintained	d by the US EF	A, or are exe	mpt from that	listing.	
* Indicates this chemical is	subject to the reporting requ	irements of Section	on 313 of the E	Emergency Pla	anning and Co	mmunity Right	-to-Know Act	of 1986 (40C		
	al is found on Proposition 6	o's List of chemica	als known to th	e State of Ca	ifornia to caus	se cancer or re	productive to	xicity.		
SECTION 4 - FIRS		h planty of water	for 15 minuton	and eack me	diaal advice in	modictoly				
Contact with eyes: Skin contact:	Flush eyes immediately wit Remove contaminated clot						evelops, seek	medical adv	ice.	
Inhalation:	Remove to fresh air. If bre									
In month on a			give artificial	respiration. II	breathing is d	lifficult, give ox	ygen. Seek	medical advic	e.	
Ingestion:	Rinse mouth with water. G	ive 1 or 2 glasses	of water or m							
Likely Routes of Exposur	e: Inhalation, E		of water or m							
-	e: Inhalation, E cts:	ive 1 or 2 glasses ye and Skin Conta	of water or mi act	ilk to dilute.	Do not induce v	vomiting. Seel	medical adv	rice immediate	ely.	
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GHS SAFETY DATA SHEET

WELD-ON® 729[™] Low VOC Cement for CPVC Plastic Pipe

Date Revised: APR 2015 Supersedes: NOV 2014

SECTION 9 - PHYSICAL AN	ID CHEMICAL	PROPERTIES			
Appearance:	Gray, extra hea	vy syrupy liquid			
Odor:	Ketone			Odor Threshold:	0.88 ppm (Cyclohexanone)
pH:	Not Applicable		_		
Melting/Freezing Point:		3°F) Based on first melting of		Boiling Range:	66°C (151°F) to 156°C (313°F)
Boiling Point:		ased on first boiling compor	nent: THF	Evaporation Rate:	> 1.0 (BUAC = 1)
Flash Point:		C based on THF		Flammability:	Category 2
Specific Gravity:	1.0 @23°C (73			Flammability Limits:	LEL: 1.1% based on Cyclohexanone
Solubility:		soluble in water. Resin por	tion separates out.	Man an Bran anna	UEL: 11.8% based on THF
Partition Coefficient n-octanol/v		lot Available		Vapor Pressure:	129 mm Hg @ 20°C (68°F)based on TH
Auto-ignition Temperature: Decomposition Temperature:	321°C (610°F) t Not Applicable	based on THF		Vapor Density: Other Data: Viscosity:	>2 (Air = 1) Extra heavy bodied
VOC Content:		is directed iner SCAOMD R	ule 1168 Test Method 3164	A,VOC content is: < 490 g/l.	Exita heavy bodied
SECTION 10 - STABILITY A				., voo oontentiis. <u></u>	
Stability:		table			
Hazardous decomposition prod			orced to burn, this product o	nives off oxides of carbon, hy	drogen chloride and smoke.
Conditions to avoid:		eep away from heat, sparks			
Incompatible Materials:		xidizers, strong acids and b			
SECTION 11 - TOXICOLOG		. 0			
oxicity:	LD50		LC50		Target Organs
Tetrahydrofuran (THF)	Oral: 2842 mg/k	(rat)	Inhalation :	3 hrs. 21,000 mg/m ³ (rat)	STOT SE3
Methyl Ethyl Ketone (MEK)		(rat), Dermal: 6480 mg/kg		8 hrs. 23,500 mg/m ³ (rat)	STOT SE3
Cyclohexanone		kg (rat), Dermal: 948 mg/kg		4 hrs. 8,000 PPM (rat)	0101020
Reproductive Effects Tera	atogenicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products
	Established	Not Established	Not Established	Not Established	Not Established
SECTION 12 - ECOLOGICA	L INFORMATI	ON			
Ecotoxicity: None Know					
		atile organic compounds (V	OC's) to the air takes place	typically at a rate of < 490	1/1
		atile organic compounds (V	OC's) to the air takes place,	, typically at a rate of \leq 490 g	ŋ/l.
Degradability: Not readily	/ biodegradable	atile organic compounds (V	OC's) to the air takes place,	, typically at a rate of \leq 490 g	ŋ/l.
Degradability: Not readily Bioaccumulation: Minimal to	/ biodegradable none.		OC's) to the air takes place,	, typically at a rate of <u><</u> 490 g	ŋ/l.
Degradability: Not readily Bioaccumulation: Minimal to SECTION 13 - WASTE DISP	v biodegradable none. POSAL CONSII	DERATIONS	OC's) to the air takes place,	, typically at a rate of \leq 490 g	y/l.
Degradability: Not readily Bioaccumulation: Minimal to SECTION 13 - WASTE DISP Follow local and national regulations.	v biodegradable none. POSAL CONSII Consult disposal ex	DERATIONS pert.	OC's) to the air takes place,	, typically at a rate of \leq 490 g	y/l.
Degradability: Not readily Bioaccumulation: Minimal to SECTION 13 - WASTE DISP Follow local and national regulations. SECTION 14 - TRANSPORT	v biodegradable none. POSAL CONSII Consult disposal ex INFORMATIO	DERATIONS pert.	OC's) to the air takes place,	, typically at a rate of \leq 490 g	y/l.
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Degradability: Not readily Bioaccumulation: Minimal to SECTION 13 - WASTE DISP Follow local and national regulations. I SECTION 14 - TRANSPORT Proper Shipping Name: Hazard Class:	v biodegradable none. POSAL CONSII Consult disposal ex INFORMATIO Adhesives 3	DERATIONS pert. N	ЕХСЕРТ	ION for Ground Shipping	
Degradability: Not readily Bioaccumulation: Minimal to SECTION 13 - WASTE DISP Follow local and national regulations. SECTION 14 - TRANSPORT Proper Shipping Name: Hazard Class: Secondary Risk:	v biodegradable none. POSAL CONSII Consult disposal ex INFORMATIO Adhesives 3 None	DERATIONS pert. N DOT Limited	EXCEPT Quantity: Up to 5L per inne	ION for Ground Shipping er packaging, 30 kg gross we	ight per package.
Degradability: Not readily Bioaccumulation: Minimal to SECTION 13 - WASTE DISP Follow local and national regulations. Of SECTION 14 - TRANSPORT Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number:	v biodegradable none. POSAL CONSII Consult disposal ex INFORMATIO Adhesives 3 None UN 1133	DERATIONS pert. N DOT Limited	EXCEPT Quantity: Up to 5L per inne	ION for Ground Shipping er packaging, 30 kg gross we	
Degradability: Not readily Bioaccumulation: Minimal to SECTION 13 - WASTE DISP Follow local and national regulations. O SECTION 14 - TRANSPORT Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group:	v biodegradable none. POSAL CONSII Consult disposal ex INFORMATIO Adhesives 3 None UN 1133 PG II	DERATIONS pert. N DOT Limited Consumer Co	EXCEPT Quantity: Up to 5L per inne ommodity: Depending on p	ION for Ground Shipping er packaging, 30 kg gross we ackaging, these quantities n	ight per package.
Degradability: Not readily Bioaccumulation: Minimal to SECTION 13 - WASTE DISP Follow local and national regulations. O SECTION 14 - TRANSPORT Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required:	v biodegradable none. CONSUL CONSUL Consult disposal ex INFORMATIO Adhesives 3 None UN 1133 PG II Class 3 Flamma	DERATIONS pert. N DOT Limited Consumer Co	EXCEPT Quantity: Up to 5L per inne ommodity: Depending on p	ION for Ground Shipping er packaging, 30 kg gross we ackaging, these quantities n DG INFORMATION	ight per package. ay qualify under DOT as "ORM-D" .
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This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

20.95 DIRECTL I to ble to 100 20 TRANS whole: WELD×ON. dette HOLEDE as work 1. OUTES (mind with ontato i tritici nes 2.0615 it istat how it's Gi ffed 3 Delste and figh 713™ CPVC trates: inter I 4. April 201 in mine CORRER the me 5.Aphalis THE WAY of \$208 (2) BOSSEDI of minds ORANGE - ANARANJADO postB/C 100 0 000 REGULAR BODIED + FAST SETTING Exercici OR HOOKS aserti il CPVC PLASTIC PIPE CEMENT 1 els ben OW VO parter inter VISCOSIDAD REGULAR + SECADO RÁPIDO 27280 001 PEGAMENTO PARA TUBOS DE CPVC TAbulat Partiet S alters! For copper tube size and Sch. 40 CPVC pipe thu? traile un Mass interference fit. For cold and hot potable water to 180°F. intrateros DESIST Para tuberia de CPVC dimensiones de tubo de cobre 1000 solamente y Ced. 40 de interferencia hasta 63 mm de dá RICKOR in low ? agua potable fria y caliente hasta 82°C. Mar (Car) L'ERENT & SHAKE WELL BEFORE USE! AGITESE ANTES DE USARSE 학배의 1 Quart (32 Fl. Oz. U.S.) • Cont. Net. 946 mL m 67-64-11 DANGER/PELIGRO: EXTREMELY FLAMMABLE VAPOR HARMFUL MAY BE HARMFUL IF SWALLOWED. MAY IRRITATE SKIN

OR EYES. READ CAUTIONS CAREFULLY ON LEFT PANEL

EXTREMADAMENTE INFLAMABLE. VAPOR PELIGROSO. PUEDE SER

PELIGROSO SI SE INGIERE. PUEDE IRRITAR LA PIEL Y LOS QUOS LEA

LAS PRECAUCIONES A LA IZQUIERDA.

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P CORDAN **Yakitti**

The Local Division of the

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WELD×									Date Revised.	APR 2015	
		WE	ELD-ON® 7	'13™ Low V	OC Cemen	t for CPVC	Plastic Pi	ре	Supersedes:	NOV 2014	
SECTION I - PRODU											
PRODUCT NAME: PRODUCT USE:	WELD-ON® 713 Low VOC Solvent				ripe						
SUPPLIER:		Comon n		MANUFA	CTURER:	IPS Corporat	ion				
						P.O. Box 379	Main Street, G , Gardena, CA				
EMERGENCY: Transportati	ion: CHEMTEL Tel	. 800.255-3	3924, +1 813-2	248-0585 (Interna	ational)	Tel. 1-310-89 Medical: CHI		0.255-3924, -	+1 813-248-0	585 (International	
SECTION 2 - HAZA	RDS IDENTIF	CATION	1								
HS CLASSIFICATION:	alth		1	Environr	montal			Dh	weigel		
He Acute Toxicity:	ealth Category 4		Acute Toxicity		None Known		Flammable Li		nysical	Category 2	
Skin Irritation:	Category 3		Chronic Toxic		None Known			•		0 ,	
Skin Sensitization:	NO Category 2										
GHS LABEL:				Signal Word:			WHMIS CLASS	IFICATION:	CLASS B, D	IVISION 2	
•				Danger					CLASS D, D		
	Hazard Stat	ements					Precautiona	ry Statements	<u>s</u>		
225: Highly flammable liquid a	ind vapor						arks/open flame:	s/hot surfaces –			
319: Causes serious eye irritat 332: Harmful if inhaled	tion						ne/gas/mist/vapo protective clothing		/face protection		
335: May cause respiratory irri	itation									ition comfortable for	breathi
336: May cause drowsiness or							ntilated place. Ke				
351: Suspected of causing car UH019: May form explosive pe					P501: Dispose	or contents/conf	tainer in accorda	nce with local n	egulation		
UH066: Repeated exposure m	nay cause skin drynes										_
ECTION 3 - COMP	OSITION/INF	ORMATI	ION ON INC	GREDIENTS EINECS #	REA	АСН	0	ONCENTRATIC	ON		
otrobudrofuron (TUE)			109-99-9	203-726-8	Pre-registratio	n Number		% by Weight	-		
etrahydrofuran (THF) lethyl Ethyl Ketone (MEK)			78-93-3	203-726-8	05-21162977			40 - 55 10 - 25			
yclohexanone			108-94-1	203-631-1	05-21162977			10 - 25			
			67-64-1	200-662-2	05-21162977			5 - 15		lindin n	
			- the TOOA :			es maintained					
		rting requir	rements of Sec	tion 313 of the E	mergency Pla					11(3/2).	
indicates that this chemica ECTION 4 - FIRST Contact with eyes: Skin contact:	subject to the repo al is found on Prop AID MEASUF Flush eyes immed Remove contamin	rting requir osition 65's RES diately with nated cloth	s List of chemin plenty of wate	ction 313 of the E cals known to th er for 15 minutes . Wash skin tho	e State of Cali and seek med roughly with sc	fornia to caus lical advice im pap and water	e cancer or rep mediately.	oroductive tox	kicity.	ce.	
	Subject to the repo al is found on Prop AID MEASUF Flush eyes immer Remove contamin Remove to fresh Rinse mouth with E: Inh	rting requir osition 65's RES diately with hated cloth air. If brea water. Giv alation, Eyr sure may re comfortable ay remove r	rements of Sec s List of chemi on plenty of wate ining and shoes. thing is stoppe ve 1 or 2 glass e and Skin Cor esult in nausea le. Overexpos natural skin oils	ttion 313 of the E cals known to th er for 15 minutes. Wash skin tho .Wash skin tho d, give artificial es of water or m ntact a, dizziness, hea ure may result ir s resulting in skii	Emergency Pla e State of Cali and seek mec roughly with sc respiration. If ilk to dilute. D dache. Can ca s severe eye in h irritation. De	fornia to caus lical advice im pap and water breathing is d to not induce v ause drowsine jury with corn	e cancer or rep mediately. . If irritation de ifficult, give ox vomiting. Seel ess, irritation of eal or conjunct	evelops, seek ygen. Seek n < medical adv	kicity. medical advice rice immediate sal passages. tion on conta	ce. 3. 9ly.	
Endicates that this chemical ECTION 4 - FIRST Contact with eyes: Skin contact: Inhalation: Ingestion: ikely Routes of Exposure cute symptoms and effect Inhalation: Eye Contact: Skin Contact: Ingestion: Chronic (long-term) effect:	Subject to the repo al is found on Prop Fush eyes immer Remove contamin Remove to fresh Rinse mouth with Severe overexpoor Vapors slightly un Liquid contact ma May cause nause s: Cal	rting requir osition 65's RES diately with hated cloth air. If brea water. Giv alation, Eyr sure may re comfortable by remove r ia, vomiting tegory 2 Ca	rements of Sec s List of chemi ing and shoes, tthing is stoppe ve 1 or 2 glass e and Skin Cor esult in nausea le. Overexpos g, diarrhea and arcinogen	ttion 313 of the E cals known to th er for 15 minutes. Wash skin tho .Wash skin tho d, give artificial es of water or m ntact a, dizziness, hea ure may result ir s resulting in skii	Emergency Pla e State of Cali and seek mec roughly with sc respiration. If ilk to dilute. D dache. Can ca s severe eye in h irritation. De	fornia to caus lical advice im pap and water breathing is d to not induce v ause drowsine jury with corn	e cancer or rep mediately. . If irritation de ifficult, give ox vomiting. Seel ess, irritation of eal or conjunct	evelops, seek ygen. Seek n < medical adv	kicity. medical advice rice immediate sal passages. tion on conta	ce. 3. 9ly.	
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indicates that this chemic: SECTION 4 - FIRST Contact with eyes: Skin contact: Inhalation: Ingestion: likely Routes of Exposure cute symptoms and effect Inhalation: Eye Contact: Skin Contact: Ingestion: Stronic (long-term) effect: ScTION 5 - FIREF Suitable Extinguishing M Unsuitable Extinguishing M Unsuitable Extinguishing M Unsuitable Extinguishing M Unsuitable Extinguishing M Exposure Hazards: Combustion Products: Protection for Firefighter SECTION 6 - ACCIE Personal precautions: Environmental Precaution Materials not to be used SECTION 7 - HAND Handling: Avoid breathir Keep away fro Do not eat, dr Storage: Store in ventil Keep away fro Follow all prec SECTION 8 - PREC EXPOSURE LIMITS: Engineering Controls: Monitoring: Personal Protective Equi Eye Protection:	subject to the repo al is found on Prop Flush eyes immer Remove contamin Remove to fresh Rinse mouth with Severe overexpor Vapors slightly ur Liquid contact ma May cause nause s: Cal GHTING MEL Media: Dry g Media: Dry g Media: Dry g Media: Wa Inh Oxi rs: Sel DENTAL RELE Ker Severe overexpor Pro ns: Pre for Clean up: LING AND ST Mang of vapor, avoid of m ignition sources ink or smoke while ated room or shad m ignition sources cautionary informat AUTIONS TO Compone Tetrahydrofuran (Methyl Ethyl Keto Cyclohexanone Acetone Use local exhauss Maintain breathin pomet (PPE): Avoid contact wit	rting requir rosition 65's RES diately with hated cloth air. If brea water. Gis alation, Eyu sure may re comfortabl y remove r a, vomiting ter spray of alation and des of cart f-contained alation and des of cart f-contained ap away fre vide suffici voent contained contact with s, use only handling. e below 33 s and incon contact with s, use only handling. e below 33 s and incon contact with s, as needed g zone airb h eyes, we propriate f vith the skii sistant glow	rements of Sec s List of chemi- ing and shoes, thing is stoppe we 1 or 2 glass e and Skin Cor esult in nausea le. Overexpos natural skin oili g, diarrhea and g, diarrhea and d dermal contar bon, hydrogen d breathing app EASURES om heat, spark ient ventilation to vitik skin or uct or liquids cc sand or other Aluminum or f Aluminum or f ar electrically gro S ^S (90°F) and mpatible materi S ^S (90°F) and mpatible materi soorne concentr. ar splash-prooi for the exposur	tion 313 of the E cals known to th er for 15 minutes . Wash skin tho d, give artificial es of water or m ntact a, dizziness, hea ure may result in s resulting in skik I mental sluggish in dioxide gas, for ct chloride and sm paratus or full-far s and open flam, , use explosion-1 gastic container ad clothing. unded handling away from direc fals: caustics, an ad clothing. unded handling away from direc alals: caustics, an URE / PERS ACGH STEL 100 ppm 300 ppm 50 ppm 750 ppm ations below exp f chemical goggl re. possibale. Butyl ru resistant barrier	mergency Pla e State of Cali and seek mec roughly with sc respiration. If i ilk to dilute. D dache. Can cc is severe eye in n irritation. De iness. am, Halon, wa oke ce positive pre- e. or of exhaust of n 8). product from i material. Tran s equipment and t sunlight. monia, inorga nd solvent cer CONAL PRC OSHA PEL 200 ppm 50 ppm 1000 ppm 1000 ppm	fornia to caus final advice in ause advice in ause drowsine jury with corn rmatitis may con- iter fog. ssure airline n ventilation equ entering sewe sfer to a close d ensure adeq inic acids, chla nenting literat DTECTION OSHA STEL N/E N/E N/E N/E N/E N/E N/E N/E	e cancer or rep imediately. If irritation di ifficult, give ox vomiting. Seel eass, irritation of eal or conjunct boccur with prole boccur	productive tox productity productive tox productive tox productive tox productiv	kicity. Imedical advice Imedical advice Immedical advice	ce a ct with the liquid. 0-Minimal 1-Slight 2-Moderate 3-Serious 4-Severe ctive equipment. ctive equipment. d isocyanates. CAL/OSHA STEL 250 ppm 300 ppm N/E 750 ppm 250 ppm	



GHS SAFETY DATA SHEET

WELD-ON® 713[™] Low VOC Cement for CPVC Plastic Pipe

Date Revised: APR 2015 Supersedes: NOV 2014

		OUENIA		UES .						
SECTION 9 - PHYS	ICAL AND									
Appearance: Odor:			lar syrupy liquid	3		O day Ti	reshold:	0.00 (0)	h	
		Ketone	•			Odor Ir	resnoia:	0.88 ppm (Cyclo	nexanone)	
pH: Melting/Freezing Poir		Not Applicable		on first melting c		Dailing	Dongo	56°C (133°F) to	15690 (21295	-\
Boiling Point:	nt:			boiling compone		Boiling				-)
Flash Point:			FCC based on linst		ent. Acetone	Flamma		> 1.0 (BUAC = 1 Category 2)	
Specific Gravity:		0.925 @23°C		Acelone				LEL: 1.1% base	od on Cyclobe	vonor
Solubility:				ter Pesin porti	on separates out.	Fidilillid		UEL: 12.8% base		
Partition Coefficient	n ootonol/wat		Not Available		un separates out.	Vapor B		190 mm Hg @ 2		
Auto-ignition Temper) based on TH			Vapor P Vapor D		>2.0 (Air = 1)	20 C (00 F) A	Celone
Decomposition Temp		Not Applicable		F				Regular bodied		
VOC Content:	Jerature.			er SCAOMD Ru	le 1168, Test Method			Regular bouled		
SECTION 10 - STAI	RII ΙΤΥ ΔΝ						ion io. <u>-</u> 100 gri:			
Stability:			Stable							
Hazardous decompos	sition produc	ts:	None in norm	al use. When fo	rced to burn, this pro	duct gives off ox	des of carbon, hyd	drogen chloride a	nd smoke.	
Conditions to avoid:	-		Keep away fro	om heat, sparks.	open flame and othe	er ianition source	IS.	-		
Incompatible Materia	ls:				ases, amines, ammor					
SECTION 11 - TOX		AL INFORM		3						
oxicity:		LD50			L	C50		Target O	rgans	
Tetrahydrofuran (THF)		Oral: 2842 mg	a/ka (rat)			ation 3 hrs. 21,0	00 mg/m ³ (rat)	STOT		
Methyl Ethyl Ketone (MEK	5			nal: 6480 mg/kg		ation 8 hrs. 23,5		STOT		
Cyclohexanone	·/			nal: 948 mg/kg (ation 4 hrs. 8,00		5101	020	
Acetone		Oral: 5800 mg		nai. 540 mg/kg (ation 50,100 mg/		STOT	SE3	
Reproductive Effects Not Established		ogenicity tablished		genicity stablished	Embryotoxicit Not Establishe		zation to Product t Established	Synergistic Not Estat]
		abilotioa						Hot Eotai	Shorioa	
										_
Ecotoxicity: Mobility:	None Known In normal us	e, emission of v		compounds (VC	DC's) to the air takes	place. Typically	at a rate of <u><</u> 490 g	g/l.		
Ecotoxicity: Mobility: Degradability: Bioaccumulation:	None Known In normal us Not readily b Minimal to no	e, emission of v iodegradable one.	volatile organic		DC's) to the air takes	place. Typically	at a rate of <u><</u> 490 g	g/l.		
Ecotoxicity: Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS	None Known In normal us Not readily b Minimal to no STE DISPO	e, emission of v iodegradable one. SAL CONS	volatile organic		DC's) to the air takes	place. Typically	at a rate of \leq 490 g	g/l.		
Ecotoxicity: Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS Follow local and national re	None Known In normal us Not readily b Minimal to no STE DISPO egulations. Co	e, emission of v iodegradable one. SAL CONS nsult disposal e	volatile organic IDERATION expert.		DC's) to the air takes	place. Typically	at a rate of <u>≺</u> 490 g	J/I.		
Ecotoxicity: Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS Follow local and national re SECTION 14 - TRAN	None Known In normal us Not readily b Minimal to no STE DISPO egulations. Co	e, emission of v iodegradable one. SAL CONS nsult disposal e IFORMATIC	volatile organic IDERATION expert.		DC's) to the air takes	place. Typically	at a rate of <u><</u> 490 g	g/l.		
Ecotoxicity: Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS Follow local and national re SECTION 14 - TRAN Proper Shipping Name:	None Known In normal us Not readily b Minimal to no STE DISPO egulations. Co	e, emission of v iodegradable one. SAL CONS nsult disposal e IFORMATIC Adhesives	volatile organic IDERATION expert.					g/l.		
Ecotoxicity: Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS Follow local and national re SECTION 14 - TRAN Proper Shipping Name: Hazard Class:	None Known In normal us Not readily b Minimal to no STE DISPO egulations. Co	e, emission of v iodegradable one. SAL CONS nsult disposal e IFORMATIC Adhesives 3	volatile organic IDERATION expert.	NS	EX	CEPTION for G	round Shipping			
Ecotoxicity: Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS Follow local and national re SECTION 14 - TRAN Proper Shipping Name: Hazard Class: Secondary Risk:	None Known In normal us Not readily b Minimal to no STE DISPO egulations. Co	e, emission of v iodegradable one. SAL CONS nsult disposal e IFORMATIC Adhesives 3 None	volatile organic IDERATION expert.	NS DOT Limited C	EX: Quantity: Up to 5L pe	CEPTION for G	round Shipping g, 30 kg gross weig	jht per package.	NOT as "OPM	
Ecotoxicity: Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS follow local and national re SECTION 14 - TRAN Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number:	None Known In normal us Not readily b Minimal to no STE DISPO egulations. Co	e, emission of v iodegradable one. SAL CONS nsult disposal e IFORMATIC Adhesives 3 None UN 1133	volatile organic IDERATION expert.	NS DOT Limited C	EX	CEPTION for G	round Shipping g, 30 kg gross weig	jht per package.	OT as "ORM-	-D" .
Ecotoxicity: Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS Follow local and national re SECTION 14 - TRAN Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group:	None Known In normal us Not readily b Minimal to no STE DISPO egulations. Co	e, emission of v iodegradable one. SAL CONS SAL CONS IFORMATIC Adhesives 3 None UN 1133 PG II	volatile organic IDERATION expert. DN	NS DOT Limited C	EX: Quantity: Up to 5L pe	CEPTION for G r inner packagin on packaging, t	round Shipping g, 30 kg gross weig hese quantities ma	jht per package.	OT as "ORM-	-D" .
Ecotoxicity: Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS Follow local and national re SECTION 14 - TRAN Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required:	None Known In normal us Not readily b Minimal to no STE DISPO egulations. Co	e, emission of v iodegradable one. SAL CONS nsult disposal e IFORMATIC Adhesives 3 None UN 1133 PG II Class 3 Flamr	volatile organic IDERATION expert. DN	NS DOT Limited C	EX Quantity: Up to 5L pe mmodity: Depending	CEPTION for G	round Shipping g, 30 kg gross weig hese quantities ma MATION	jht per package. y qualify under D	OT as "ORM-	-D" .
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Ecotoxicity: Mobility: Degradability: Bioaccumulation: SECTION 13 - WAS Ollow local and national re SECTION 14 - TRAN Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant: SECTION 15 - REG Precautionary Label In Symbols:	None Knowr In normal us Not readily b Minimal to nu STE DISPO gulations. Co NSPORT IN NSPORT IN NSPORT IN NSPORT IN R11: Highly fl R20-Harmful R36/37: Irrital	e, emission of v iodegradable one. SAL CONS nsult disposal e IFORMATIC Adhesives 3 None UN 1133 PG II Class 3 Flamm NO INFORMAT Highly Flamm F, Xi ammable. by inhalation.	rolatile organic IDERATION expert. DN mable Liquid FION rable, Irritant, C respiratory syste	DOT Limited 0 Consumer Con	EX Duantity: Up to 5L pe mmodity: Depending TDG CLASS: SHIPPING NAME: UN NUMBER/PACK Ingredient Listings: AI R66: Repeated expos	CEPTION for G r inner packaging, t TDG INFOR (ING GROUP: USA TSCA, Eu CS, Korea ECL/ ure may cause si se drowsiness an	round Shipping g, 30 kg gross weig hese quantities mar FLAMMABLE ADHESIVES UN 1133, PG TOPE EINECS, Cana TCCL, Japan MITI tin dryness or crackir d dizziness	yht per package. y qualify under D LIQUID 3 II ada DSL, Austral (ENCS) 19	ia	
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This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.



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THE REPORT OF A LOCAL DIST.

PURPLE • MORADO

And a state of the second

 Premium industrial strength primer for softening and preparation of PVC and CPVC pipe and fitting surfaces. Specially recommended for Sch. 80 and large size pipe.

DXON

 Primer de alta fuerza y superior para ablandar y preparar los tubos y uniones de PVC y CPVC. Recomendado especialmente para tubería de gran tamaño y Ced. 80.

1 Quart (32 FI. Oz. U.S.) + Cont. Net. 946 mL DANGER/PELIGRO: EXTREMELY FLAMMABLE VAPOR HARMFUL MAY BE HARMFUL IF SWALLOWED. MAY IRRITATE SKN OR EYES. READ CAUTIONS CAREFULLY ON LEFT PANEL EXTREMADAMENTE INFLAMABLE. VAPOR PELIGROSO, PUEDE SER PEUGROSO SI SE INGIERE. PUEDE IRRITAR LA PIEL Y LOS QUOS LEA LAS PRECAUCIONES A LA IZQUIERDA.

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WELD	ON.	GF	IS SAFE			ET				
	WELD-C	ON® P-70™	Low VOC	Primer for	· PVC and	CPVC Plas	stic Pipe	Date Revised: Supersedes:		
SECTION I - PRODI	UCT AND COMPANY I	DENTIFICA	TION							
PRODUCT NAME:	WELD-ON® P-70™ Low V	OC Primer for	PVC and CPV	C Plastic Pip	e					
PRODUCT USE:	Low VOC Primer for PVC a	nd CPVC Plasti								
SUPPLIER:			MANUFA	ACTURER:	P.O. Box 37	Main Street, 0 9, Gardena, C/				
	tion: CHEMTEL Tel. 800.255-	302/ +1 813-2	18-0585 (Inter	(national	Tel. 1-310-8		00 255-3024	+1 813-248-0	585 (International)	
			40 0000 (inter	mationaly			.200 0024,	110102400		
	ealth		Environ	mental			P	hysical		
Acute Toxicity:	Category 4	Acute Toxicity		None Known		Flammable L			Category 2	
Skin Irritation: Skin Sensitization: Sye:	Category 3 NO Category 2	Chronic Toxici	ity:	None Known						
GHS LABEL:			Signal Word:			WHMIS CLASS	SIFICATION:	CLASS B, D	IVISION 2	
•			Danger					CLASS D, D		
	Hazard Statements						ary Statement			
I225: Highly flammable liquid a I319: Causes serious eye irrita					, ,	oarks/open flame ne/gas/mist/vapo		 No smoking 		
1332: Harmful if inhaled						protective clothin		n/face protection	n	
1335: May cause respiratory in				P304+P340: IF	INHALED: Rer	nove victim to fre	esh air and keep	o at rest in a pos	sition comfortable for brea	athing
336: May cause drowsiness o						ntilated place. Ke				
351: Suspected of causing ca UH019: May form explosive p				P501: Dispose	of contents/cor	tainer in accorda	ance with local	regulation		
	POSITION/INFORMAT	ION ON INC	REDIENT	S						
		CAS#	EINECS #	RE	ACH	c	ONCENTRATI			
etrahydrofuran (THF)		109-99-9	203-726-8	Pre-registration 05-21162977			% by Weight 45 - 59	-		
ethyl Ethyl Ketone (MEK)		78-93-3	203-720-8	05-21162977			43 - 39 19 - 29			
/clohexanone		108-94-1	203-631-1	05-21162977			5 - 15			
cetone		67-64-1		05-21162977			5 - 20			
	is adhesive product are listed									
	subject to the reporting require al is found on Proposition 65'								GFR372).	
ECTION 4 - FIRST										
Contact with eyes: Skin contact:	Flush eyes immediately with						develope of	ok modiaal aa	hiaa	
Inhalation:	Remove contaminated cloth Remove to fresh air. If brea									
Ingestion:	Rinse mouth with water. Gi									
ikely Routes of Exposur		e and Skin Con	tact							
cute symptoms and effe Inhalation:	severe overexposure may r	ecult in nausea	dizziness he	adacha Car	cause drows	inces irritation	of eves and	nacal naccad	20	
Eye Contact:	Vapors slightly uncomfortab									
Skin Contact:	Liquid contact may remove				Dermatitis ma	y occur with pr	rolonged cont	act.		
Ingestion:	May cause nausea, vomiting		mental sluggis	shness.						
hronic (long-term) effect		-								
Suitable Extinguishing I	FIGHTING MEASURES	powder, carbor	dioxide das	foam Halon	water for		HMIS	NFPA	0-Minimal	
Unsuitable Extinguishin			i uluxiue gas,	ioani, naion,	water iog.	Health	2	2	1-Slight	
Exposure Hazards:	Inhalation and	d dermal contac				Flammability	3	3	2-Moderate	
Combustion Products:	Oxides of car	bon and smoke				Reactivity	0	0	3-Serious	
Protection for Firefighte	ers: Self-contained	d breathing app	aratus or full-f	ace positive r	ressure airlin	e masks.	D			
	DENTAL RELEASE M									
Personal precautions:		om heat, sparks	and open fla	me.						
					st ventilation e	equipment or w	/ear suitable r	espiratory pro	tective equipment.	
Environmental Precautio		act with skin or e uct or liquids co			m enterina se	wers drains e	oil or open w	ater course		
Methods for Cleaning up		sand or other i								
Materials not to be used		Aluminum or p								
	DLING AND STORAGE									
	ng of vapor, avoid contact wit									
	om ignition sources, use only rink or smoke while handling.	electrically grou	unded nandlin	g equipment a	and ensure ad	equate ventila	tion/tume exh	aust noods.		
	ilated room or shade below 44	4°C (110°F) and	away from di	rect sunlight.						
- Keep away fr	om ignition sources and incor	mpatible materia	als: caustics, a	ammonia, inor			npounds, stro	ng oxidizers a	nd isocyanates.	
	cautionary information on cor				9					_
ECTION 8 - PREC	AUTIONS TO CONTR	OL EXPOS	UKE/PER	SUNAL P	RUIECHO	1				
KPOSURE LIMITS:	Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL	OSHA PEL-Ceiling	CAL/OSHA PEL	CAL/OSHA Ceiling	CAL/OSHA STEL	
	Tetrahydrofuran (THF)	50 ppm	100 ppm	200 ppm	N/E	N/E	200 ppm	N/E	250 ppm	
	Methyl Ethyl Ketone (MEK)	200 ppm	300 ppm	200 ppm	N/E	N/E	200 ppm	N/E	300 ppm	
	Cyclohexanone Acetone	20 ppm 500 ppm	50 ppm 750 ppm	50 ppm 1000 ppm	N/E N/E	N/E N/E	25 ppm 500 ppm	N/E 3000 ppm	N/E 750 ppm	
Engineering Controls:	Use local exhaust as neede		, 30 bhill	1000 hhill	IN/E	IN/E	200 hhiii	5500 ppm	700 ppm	
Monitoring:	Maintain breathing zone airt		ations below e	xposure limits						
Personal Protective Equ			about 1	alaa k					(de 1967)	
Eye Protection:	Avoid contact with eyes, we etc. as may be appropriate to			igies, tace shi	eid, safety gla	sses (spectacl	es) with brow	guards and s	ade shields,	
Skin Protection:	Prevent contact with the ski			rubber gloves	should be us	ed for frequent	t immersion.			
-	Use of solvent-resistant glov	ves or solvent-r	esistant barrie	er cream shou				nal adhesive a	application	
Poppiratory Dectantia	practices and procedures and Provent inhelation of the col				n doorn	r window - t-		and air		
Respiratory Protection:	Prevent inhalation of the sol exhaust ventilation to remove									
	With normal use, the Expos									



GHS SAFETY DATA SHEET

Date Revised: MAY 2016 WELD-ON® P-70™ Low VOC Primer for PVC and CPVC Plastic Pipe Supersedes: APR 2015

Appearance:		CHEMICAL Clear or purple							
Odor:		Ethereal	.,				Odor Threshold:	0.88 ppm (Cyclohexanone)	
pH:		Not Applicable						(.)	
Melting/Freezing Poin	t:	-108.5°C (-163	3.3°F) Based or	first melting	component: TH	=	Boiling Range:	56°C (133°F) to 156°C (313°F	=)
Boiling Point:		56°C (133°F) I	Based on first b	oiling compo	nent: Acetone		Evaporation Rate:	> 1.0 (BUAC = 1)	
Flash Point:			CC based on A	cetone			Flammability:	Category 2	
Specific Gravity:		0.858 @23°C					Flammability Limits:	LEL: 1.1% based on Cyclohe	
Solubility:			n soluble in wat	er.				UEL: 12.8% based on Aceto	
Partition Coefficient n			Not Available				Vapor Pressure:	190 mm Hg @ 20°C (68°F) A	cetone
Auto-ignition Tempera Decomposition Temp		Not Applicable	based on THF				Vapor Density: Other Data: Viscosity:	>2.0 (Air = 1) Water-thin	
VOC Content:	erature.			r SCAQMD R	Rule 1168. Test M	Aethod 316	6A,VOC content is: < 550 g/l		
ECTION 10 - STAE	ΝΙ ΙΤΥ ΔΝΙ						<u> </u>	•	
Stability:			Stable						
Hazardous decompos	ition produc	ts:	None in norma	luse. When	forced to burn, t	his produc	t gives off oxides of carbon	and smoke.	
Conditions to avoid:	•				ks, open flame a				
Incompatible Material	s:		Oxidizers, stro	ng acids and	bases, amines,	ammonia			
ECTION 11 - TOXI	COLOGIC	AL INFORM	ATION						
oxicity:		LD50				LC50		Target Organs	
Tetrahydrofuran (THF)		Oral: 2842 mg	/kg (rat)		I	nhalation 3	3 hrs. 21,000 mg/m ³ (rat)	STOT SE3	
Methyl Ethyl Ketone (MEK)	1		/kg (rat), Derma	al: 6480 mg/k	g (rabbit)	nhalation 8	3 hrs. 23,500 mg/m3 (rat)	STOT SE3	
Cyclohexanone		Oral: 1535 mg	/kg (rat), Derma	al: 948 mg/kg			1 hrs. 8,000 PPM (rat)		
Acetone		Oral: 5800 mg	/kg (rat)		I	nhalation 5	50,100 mg/m ³ (rat)	STOT SE3	
Reproductive Effects	Terato	ogenicity	Mutage	nicity	Embryoto		Sensitization to Product	Synergistic Products]
Not Established	Not Es	tablished	Not Esta	blished	Not Estab	lished	Not Established	Not Established	
ECTION 12 - ECOI	LOGICAL	INFORMATI	ON						
ECTION 13 - WAS	TE DISPO	SAL CONSI	DERATION	6					
nuow local and national rec	ulations Co		-	3					
	-	nsult disposal e	xpert.	3					
ECTION 14 - TRAN	-	nsult disposal ex IFORMATIO	xpert.		vdrofuran)				
	-	nsult disposal ex IFORMATIO	xpert.		ydrofuran)	_			
ECTION 14 - TRAN Proper Shipping Name: Hazard Class:	-	nsult disposal ex IFORMATIO Flammable Lic	xpert. N quid, n.o.s. (Ace	etone, Tetrah			XCEPTION for Ground Ship		
ECTION 14 - TRAN Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number:	-	IFORMATIO Flammable Lic None UN 1993	xpert. N quid, n.o.s. (Ace	otone, Tetrah	Quantity: Up to	1L per inn	er packaging, 30 kg gross w	eight per package.	
ECTION 14 - TRAN Proper Shipping Name: Hazard Class: Secondary Risk: Identification Number: Packing Group:	-	IFORMATIO Flammable Lic 3 None UN 1993 PG II	xpert. N quid, n.o.s. (Ace	otone, Tetrah	Quantity: Up to	1L per inn	er packaging, 30 kg gross w		M-D" .
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Intended Use of Product: Primer for PVC and CPVC Plastic Pipe

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

SECTION C

Oatey, Solvents & Cements

Contents:

1. HD PVC CEMENT 2. REG,. PVC CEMENT 3. PURPLE PRIMER 4. CPVC CEMENT. GOLD 5. HD ORANGE CEMENT 6. CLEAR PRIMER 7. PURPLE PRIMER W/CLEANER 8. RAIN OR SHINE CEMENT 9. ALL PURPOSE CEMENT





SAFETY DATA SHEET

1. Identification

1. Identification		
Product identifier	Oatey PVC Heavy Duty Clear or Gray Ceme	ent
Other means of identification		
SDS number	1102E	
Synonyms		/), 30882, 31008(TV), 31011, 31950, 31951, 31952, 105, 31118, 31978, 31979, 31980, 31981, 32050,
Recommended use	Joining PVC Pipes	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/	Distributor information	
Company Name Address Telephone	Oatey Co. 4700 West 160th St. Cleveland, OH 44135 216-267-7100	
E-mail	info@oatey.com	
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-	703-527-3887)
Emergency First Aid	1-877-740-5015 MSDS Coordinator	
Contact person	MSDS Coordinator	
2. Hazard(s) identification		
Physical hazards	Flammable liquids	Category 2
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
OSHA defined hazards	Not classified.	
Label elements		
Signal word	Danger	
Hazard statement		swallowed. May be fatal if swallowed and enters s eye irritation. May cause respiratory irritation. May
Precautionary statement		
– <i>– –</i>		

PreventionKeep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only outdoors or in a
well-ventilated area. Keep container tightly closed. Ground/bond container and receiving
equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking
tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash
thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective
gloves/protective clothing/eye protection/face protection.ResponseRinse mouth. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. If
eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash
before reuse. In case of fire: Use appropriate media to extinguish.StorageStore in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

Supplemental information

Not applicable.

3. Composition/information on ingredients

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ΝЛ	ixtures
IVI	1710162

109-99-9	30-60
67-64-1	10-30
108-94-1	10-30
9002-86-2	10-30
78-93-3	5-10
112945-52-5	1-5
	108-94-1 9002-86-2 78-93-3

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Skin contactTake off immediately all contaminated clothing. Wash with plenty of soap and water. If skin iritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.Eye contactImmediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.IngestionCall a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.Most important symptoms/effects, acute and delayedSymptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. May cause redness and pain.Indication of immediate medical attention and special treatment neededProvide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.S. Fire-fighting measuresAlcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).De not use water jet as an extinguisher, as this will spread the fire.Specific hazards arising from edical attention and flash back. During fire, gases hazardous to health may be formed.Specific nethodsUse standard firefighting procedures and fuel protective clothing must be worn in case of fire.Specific nethods <th>Inhalation</th> <th>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.</th>	Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Ingestionpresent and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.IngestionCall a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.Most important symptoms/effects, acute and delayedSymptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. May cause redness and pain.Indication of immediate medical attention and special treatment neededProvide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.General informationTake off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.5. Fire-fighting measuresAlcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).Do not use water jet as an extinguisher, as this will spread the fire.Specific hazards arising from the chemicalVapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.Specific nethodsUse standard firefighting apparatus and full protective clothing must be worn in case of fire. <t< th=""><th>Skin contact</th><th>irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before</th></t<>	Skin contact	irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before
Most important symptoms/effects, acute and delayedSymptoms and pneumonitis.Most important symptoms/effects, acute and delayedSymptoms and pneumonitis.Indication of immediate medical attention and special treatment neededProvide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.General informationTake off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.5. Fire-fighting measuresAlcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2). Do not use water jet as an extinguisher, as this will spread the fire.Specific hazards arising from the chemicalVapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.Specific methodsUse standard firefighting procedures and consider the hazards of other involved materials.Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive	Eye contact	
symptoms/effects, acute and delayedVapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. May cause redness and pain.Indication of immediate medical attention and special treatment neededProvide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.General informationTake off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.5. Fire-fighting measuresAlcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2). Do not use water jet as an extinguisher, as this will spread the fire.Specific hazards arising from the chemicalVapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.Special protective equipment and precautions for firefightersSelf-contained breathing apparatus and full protective clothing must be worn in case of fire.Fire fighting equipment/instructionsIn case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.Specific methodsUse standard firefighting procedures and consider the hazards of other involved materials.Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosiv	Ingestion	keep head low so that stomach content doesn't get into the lungs. Aspiration may cause
medical attention and special treatment neededimmediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.General informationTake off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.5. Fire-fighting measuresAlcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2). Do not use water jet as an extinguisher, as this will spread the fire.Specific hazards arising from the chemicalVapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.Specific methodsSelf-contained breathing apparatus and full protective clothing must be worn in case of fire.Fire fighting equipment/instructionsIn case of fire and/or explosion do not breath fumes. Move containers from fire area if you can do so without risk.Specific methodsUse standard firefighting procedures and consider the hazards of other involved materials.Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive	symptoms/effects, acute and	Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. May
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Suitable extinguishing mediaAlcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).Unsuitable extinguishing mediaDo not use water jet as an extinguisher, as this will spread the fire.Specific hazards arising from the chemicalVapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.Special protective equipment and precautions for firefightersSelf-contained breathing apparatus and full protective clothing must be worn in case of fire.Fire fighting equipment/instructionsIn case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.Specific methods General fire hazardsUse standard firefighting procedures and consider the hazards of other involved materials.	General information	advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take
Unsuitable extinguishing mediaDo not use water jet as an extinguisher, as this will spread the fire.Specific hazards arising from the chemicalVapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.Special protective equipment and precautions for firefightersSelf-contained breathing apparatus and full protective clothing must be worn in case of fire.Fire fighting equipment/instructionsIn case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.Specific methods General fire hazardsUse standard firefighting procedures and consider the hazards of other involved materials.	5. Fire-fighting measures	
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equipment/instructionsso without risk.Specific methodsUse standard firefighting procedures and consider the hazards of other involved materials.General fire hazardsHighly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive		Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
General fire hazards Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive		
	Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
	General fire hazards	

6. Accidental release measures

0. Accidental release meas	50165
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapors or mists. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material.
	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Use water spray to reduce vapors or divert vapor cloud drift. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.
	Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage	
Precautions for safe handling	Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not taste or swallow. Avoid breathing mist or vapor. Avoid contact with skin. Avoid contact with eyes. Avoid prolonged exposure. Avoid contact with clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling.
Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep in an area equipped with sprinklers.

8. Exposure controls/personal protection

Occupational exposure limits

U.S. - OSHA

Туре	Value	Form
TWA	0.8 mg/m3	Unspecified.
	20 mppcf	Unspecified.
ubstances (29 CFR 1910.1001-1050)		
Туре	Value	
STEL	5 ppm	
TWA	1 ppm	
Contaminants (29 CFR 1910.1000)		
Туре	Value	Form
PEL	2400 mg/m3	
	1000 ppm	
PEL	200 mg/m3	
	50 ppm	
PEL	590 mg/m3	
	TWA ubstances (29 CFR 1910.1001-1050) Type STEL TWA Contaminants (29 CFR 1910.1000) Type PEL PEL	TWA 0.8 mg/m3 20 mppcf ubstances (29 CFR 1910.1001-1050) Type Value STEL 5 ppm TWA 1 ppm Contaminants (29 CFR 1910.1000) Value PEL 2400 mg/m3 1000 ppm 200 mg/m3 50 ppm 50 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	Form
ethyl ethyl ketone (CAS	PEL	590 mg/m3	
3-93-3)		200 ppm	
olyvinyl chloride (CAS	PEL	5 mg/m3	Respirable fraction.
002-86-2)		-	
	4000)	15 mg/m3	Total dust.
S. OSHA Table Z-3 (29 CFR 1910	.1000)		
omponents	Туре	Value	
olloidal silicon dioxide	TWA	0.8 mg/m3	
AS 112945-52-5)		20 mppcf	
S. ACGIH Threshold Limit Values	6	20 11000	
omponents	Тиро	Value	Form
	Type STEL	Value	
Propanone (CAS 67-64-1)	TWA	750 ppm 500 ppm	
vclohexanone (CAS	STEL	50 ppm	
)8-94-1)	UTLL .	00 ppm	
	TWA	20 ppm	
uran, Tetrahydro- (CAS)9-99-9)	STEL	100 ppm	
	TWA	50 ppm	
ethyl ethyl ketone (CAS 3-93-3)	STEL	300 ppm	
	TWA	200 ppm	
olyvinyl chloride (CAS 002-86-2)	TWA	1 mg/m3	Respirable fraction.
.S NIOSH			
omponents	Туре	Value	Form
olloidal silicon dioxide	REL	6 mg/m3	Unspecified.
CAS 112945-52-5) S. NIOSH: Pocket Guide to Chem	ical Hazarda		
5. NIOSH. POCKEL Guide to Chen			
omponents	Туре	Value	
Propanone (CAS 67-64-1)	TWA	590 mg/m3	
	T \0/0	250 ppm	
olloidal silicon dioxide AS 112945-52-5)	TWA	6 mg/m3	
vclohexanone (CAS	TWA	100 mg/m3	
	IVVA	C C	
	TWA	25 ppm	
08-94-1) uran, Tetrahydro- (CAS 09-99-9)	STEL	25 ppm 735 mg/m3	
08-94-1) uran, Tetrahydro- (CAS	STEL	735 mg/m3 250 ppm	
08-94-1) uran, Tetrahydro- (CAS		735 mg/m3 250 ppm 590 mg/m3	
08-94-1) uran, Tetrahydro- (CAS 09-99-9)	STEL TWA	735 mg/m3 250 ppm 590 mg/m3 200 ppm	
08-94-1) uran, Tetrahydro- (CAS 09-99-9) ethyl ethyl ketone (CAS	STEL	735 mg/m3 250 ppm 590 mg/m3	
08-94-1) uran, Tetrahydro- (CAS 09-99-9) ethyl ethyl ketone (CAS	STEL TWA	735 mg/m3 250 ppm 590 mg/m3 200 ppm	
08-94-1) uran, Tetrahydro- (CAS	STEL TWA	735 mg/m3 250 ppm 590 mg/m3 200 ppm 885 mg/m3	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
2-Propanone (CAS 67-64-1	l)50 mg/l	Acetone	Urine	*
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexan ediol, with hydrolysis	Urine	*
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*
Furan, Tetrahydro- (CAS 109-99-9)	2 mg/l	Tetrahydrofura n	Urine	*
Methyl ethyl ketone (CAS 78-93-3)	2 mg/l	MEK	Urine	*
* - For sampling details, ple	ease see the source de	ocument.		
posure guidelines				
US - California OELs: Ski	n designation			
Cyclohexanone (CAS US - Minnesota Haz Subs	,		absorbed thro	ugh the skin.
Cyclohexanone (CAS	•		signation appli	ies.
US - Tennessee OELs: SI			3 11	
Cyclohexanone (CAS US ACGIH Threshold Lim	-		absorbed thro	ugh the skin.
Cyclohexanone (CAS	108-94-1)	Can be	absorbed thro	ugh the skin.
Furan, Tetrahydro- (C/ US. NIOSH: Pocket Guide	<i>'</i>		absorbed thro	ugh the skin.
Cyclohexanone (CAS	108-94-1)	Can be	absorbed thro	ugh the skin.
ntrols	applicable, use p maintain airborne established, mair	rocess enclosures, loo levels below recomm	al exhaust ver ended exposu an acceptable	hould be matched to conditions. If ntilation, or other engineering controls to re limits. If exposure limits have not beer e level. Eye wash facilities and emergence
dividual protection measure				
Eye/face protection	=	ses with side shields (
Skin protection				
Hand protection	Wear appropriate	e chemical resistant gl	oves.	
Other	Wear appropriate	e chemical resistant clo	othing.	
Respiratory protection	limits (where app		table level (in o	entrations below recommended exposure countries where exposure limits have no orn.
Thermal hazards	Wear appropriate	thermal protective clo	othing, when ne	ecessary.
neral hygiene nsiderations	When using, do r	not eat, drink or smoke	e. Wash hands	after handling and before eating.
Physical and chemica	al properties			
pearance	Opaque.or Trans	lucent.		
Physical state	Liquid.			
Form	Liquid.			
Color	Gray or Clear.			
lor	Solvent.			
lor threshold	Not available.			
l	Not available.			
	N I I I I I			

5.5 - 8

Not available.

151 °F (66.11 °C)

14.0 - 23.0 °F (-10.0 - -5.0 °C)

Melting point/freezing point

range

Flash point Evaporation rate

Initial boiling point and boiling

Flammability (solid, gas)	Not available.		
Upper/lower flammability or exp	Upper/lower flammability or explosive limits		
Flammability limit - lower (%)	Not available.		
Flammability limit - upper (%)	Not available.		
Explosive limit - lower (%)	Not available.		
Explosive limit - upper (%)	Not available.		
Vapor pressure	145 mm Hg @ 20 C		
Vapor density	2.5		
Relative density	0.88 - 0.92		
Solubility(ies)			
Solubility (water)	Negligible		
Partition coefficient (n-octanol/water)	Not available.		
Auto-ignition temperature	Not available.		
Decomposition temperature	Not available.		
Viscosity	1200 - 2500 cP		
Other information			
Bulk density	7.5 lb/gal		
VOC (Weight %)	481 g/I SQACMD Method 304		
40 Ctability and reactivity			

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful. May cause irritation to the respiratory system.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Information on toxicological effects

Acute toxicity

May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.

Components	Species	Test Results
Cyclohexanone (CAS 108-94	-1)	
Acute		
Dermal		
LD50	Rabbit	948 mg/kg
Inhalation		
LC50	Rat	8000 ppm, 4 hours

Components	Species	Test Results
Oral		
LD50	Rat	1540 mg/kg
* Estimates for product may	be based on additio	omponent data not shown.
Skin corrosion/irritation	Causes skin irrita	
Serious eye damage/eye irritation	Causes serious	ritation.
Respiratory or skin sensitizatio	on	
Respiratory sensitization	Not available.	
Skin sensitization	This product is n	pected to cause skin sensitization.
Germ cell mutagenicity	No data available mutagenic or get	ndicate product or any components present at greater than 0.1% are i.ic.
Carcinogenicity	Suspected of causing cancer. In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure. This product contains polyvinyl chloride (PVC) that is not a fabricated product, and is therefore, defined and regulated as a toxic and hazardous substance under 29 C.F.R. § 1910.1017 due to the presumed presence of residual vinyl chloride monomer. The concentrations of residual vinyl chloride calculated to be contained in this product are well below the threshold for classification in accordance with 29 C.F.R. § 1910.1200.	
IARC Monographs. Overall	Evaluation of Car	aenicity
Colloidal silicon dioxide Cyclohexanone (CAS 10 Polyvinyl chloride (CAS OSHA Specifically Regulat	(CAS 112945-52-5))8-94-1) 9002-86-2)	3 Not classifiable as to carcinogenicity to humans.3 Not classifiable as to carcinogenicity to humans.3 Not classifiable as to carcinogenicity to humans.
Polyvinyl chloride (CAS	-	Cancer
Reproductive toxicity	,	pected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	-	tion. Narcotic effects.
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	May be fatal if sw	ved and enters airways.
Chronic effects	Prolonged inhalation may be harmful.	
12. Ecological informatio	n	
Ecotoxicity	The product is n	ssified as environmentally hazardous. However, this does not exclude the r frequent spills can have a harmful or damaging effect on the environment.
Components	S	es Test Results
Cyclohexanone (CAS 108-94	4-1)	
Aquatic	-	
Fish	LC50 F	ad minnow (Pimephales promelas) 481 - 578 mg/l, 96 hours
* Estimates for product may		-
Persistence and degradability	No data is availa	n the degradability of this product.
Bioaccumulative potential	No data available	
	nol / water (log Ko	0.04
Partition coefficient n-octa		
2-Propanone (CAS 67-64-1)	1-1)	-0.24 0.81
		-0.24 0.81 0.46
2-Propanone (CAS 67-64-1) Cyclohexanone (CAS 108-94	9-99-9)	0.81

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT	
UN number	UN1133
UN proper shipping name	Adhesives
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	П
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	T11, TP1, TP8, TP27
Packaging exceptions	150
Packaging non bulk	201
Packaging bulk	243
ΙΑΤΑ	
UN number	UN1133
UN proper shipping name	Adhesives
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	П
Environmental hazards	No.
ERG Code	3L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
IMDG	
UN number	UN1133
UN proper shipping name	ADHESIVES
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	Ш
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-D
	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to	Not available.
Annex II of MARPOL 73/78 and	
the IBC Code	

15. Regulatory informat	ion	
US federal regulations	Standard, 29 CFR 1910.1	bus Chemical" as defined by the OSHA Hazard Communication 200. 9 U.S. EPA TSCA Inventory List.
TSCA Section 12(b) Expo	ort Notification (40 CFR 707, S	-
Not regulated.	(, .	
OSHA Specifically Regul	ated Substances (29 CFR 191	0.1001-1050)
Polyvinyl chloride (CA	S 9002-86-2)	Cancer
		Central nervous system Liver Blood Flammability
CERCLA Hazardous Sub	stance List (40 CFR 302.4)	
2-Propanone (CAS 67	/-64-1)	LISTED
Cyclohexanone (CAS		LISTED
Furan, Tetrahydro- (C Methyl ethyl ketone (C		LISTED LISTED
Superfund Amendments and	,	
Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No	
SARA 302 Extremely haz	•	
Not listed.		
SARA 311/312 Hazardous chemical	s No	
	N N N N N N N N N N N N N N N N N N N	
SARA 313 (TRI reporting Not regulated.)	
Other federal regulations		
Clean Air Act (CAA) Sect	ion 112 Hazardous Air Pollut	ants (HAPs) List
Not regulated. Clean Air Act (CAA) Sect	ion 112(r) Accidental Release	Prevention (40 CFR 68.130)
Not regulated.		
Safe Drinking Water Act (SDWA)	Not regulated.	
Drug Enforcement A Chemical Code Num		ssential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and
2-Propanone (CA	S 67-64-1)	6532
Methyl ethyl ketor		6714
-		2 Exempt Chemical Mixtures (21 CFR 1310.12(c))
2-Propanone (CA Methyl ethyl ketor		35 %WV 35 %WV
	al Mixtures Code Number	35 % V V
2-Propanone (CA		6532
Methyl ethyl ketor		6714
US state regulations		
US. Massachusetts RTK	- Substance List	
2-Propanone (CAS 67 Colloidal silicon dioxid Cyclohexanone (CAS Furan, Tetrahydro- (C Methyl ethyl ketone (C	le (CAS 112945-52-5) 108-94-1) AS 109-99-9)	
	and Community Right-to-Kno	w Act
2-Propanone (CAS 67 Cyclohexanone (CAS		

Polyvinyl chloride (CAS 9002-86-2)

US. Pennsylvania Worker and Community Right-to-Know Law

2-Propanone (CAS 67-64-1) Colloidal silicon dioxide (CAS 112945-52-5) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3)

US. Rhode Island RTK

2-Propanone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. This product contains trace amounts of chemicals known to the state of California to cause cancer. Under normal use conditions, exposure to these chemicals at levels above the State of California "No significant Risk Level" (NSRL) are unlikely. The use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 8 will minimize exposure levels to these chemicals.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	04-August-2014
Revision date	15-December-2014
Version #	02
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available.





SAFETY DATA SHEET

1. Identification

Product identifier	PVC Regular Clear Cement		
Other means of identification			
Product code	1100E		
Synonyms	Part Numbers: 31012, 31013, 31014, 31015, 31016, 31958, 31959, 31960, 31961		
Recommended use	Joining PVC Pipes		
Recommended restrictions	None known.		
Manufacturer/Importer/Supplier	/Distributor information		
Company Name	Oatey Co.		
Address	4700 West 160th St.		
	Cleveland, OH 44135		
Telephone	216-267-7100		
E-mail	info@oatey.com		
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the	US 1-703-527-3887)	
Emergency First Aid	1-877-740-5015		
Contact person	MSDS Coordinator		
2. Hazard(s) identification	1		
Physical hazards	Flammable liquids	Category 2	
Health hazards	Acute toxicity oral	Category 4	

Physical nazards	Flammable liquids	Category 2
Health hazards	Acute toxicity, oral Skin corrosion/irritation Serious eye damage/eye irritation Specific target organ toxicity, single exposure Specific target organ toxicity, single exposure Aspiration hazard	Category 4 Category 2 Category 2A Category 3 respiratory tract irritation Category 3 narcotic effects Category 1
OSHA defined hazards	Not classified.	
Label elements		
Signal word	Danger	
Hazard statement		swallowed. May be fatal if swallowed and enters s eye irritation. May cause respiratory irritation. May
Precautionary statement		
Prevention	closed. Ground/bond container and receiving e electrical/ventilating/lighting equipment. Use o measures against static discharge. Avoid brea handling. Do not eat, drink or smoke when usi	nly non-sparking tools. Take precautionary thing mist or vapor. Wash thoroughly after
Response	contaminated clothing. Rinse skin with water/s keep comfortable for breathing. If in eyes: Rins Remove contact lenses, if present and easy to you feel unwell. Rinse mouth. Do NOT induce	o do. Continue rinsing. Call a poison center/doctor if vomiting. If skin irritation occurs: Get medical nedical advice/attention. Take off contaminated :: Use appropriate media to extinguish.
PVC Regular Clear Cement		SDS US

Storage

Disposal Hazard(s) not otherwise classified (HNOC)

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

Supplemental information

Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%	
Methyl ethyl ketone	78-93-3	25-40	
Cyclohexanone	108-94-1	10-25	
Furan, Tetrahydro-	109-99-9	10-25	
Acetone	67-64-1	5-15	
Polyvinyl chloride	9002-86-2	5-15	

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.
5. Fire-fighting measures	
Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

6. Accidental release measures

V. Accidental release meas	
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.
	Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.
	Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage	
Precautions for safe handling	Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Туре	Value	
Polyvinyl chloride (CAS 9002-86-2)	STEL	5 ppm	
5002 00 2)	TWA	1 ppm	

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	Form
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
		1000 ppm	
Cyclohexanone (CAS 108-94-1)	PEL	200 mg/m3	
,		50 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	PEL	590 mg/m3	
,		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	PEL	590 mg/m3	
,		200 ppm	
Polyvinyl chloride (CAS 9002-86-2)	PEL	5 mg/m3	Respirable fraction.
,		15 mg/m3	Total dust.

US. ACGIH Threshold Limit Values

Components	Туре	Value	Form
Acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
Cyclohexanone (CAS 108-94-1)	STEL	50 ppm	
	TWA	20 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	100 ppm	
	TWA	50 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	
Polyvinyl chloride (CAS 9002-86-2)	TWA	1 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Туре	Value	
Acetone (CAS 67-64-1)	TWA	590 mg/m3	
		250 ppm	
Cyclohexanone (CAS 108-94-1)	TWA	100 mg/m3	
		25 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	735 mg/m3	
		250 ppm	
	TWA	590 mg/m3	
		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	885 mg/m3	
		300 ppm	
	TWA	590 mg/m3	
		200 ppm	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time	
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*	
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexan ediol, with hydrolysis	Urine	*	
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*	
Furan, Tetrahydro- (CAS 109-99-9)	2 mg/l	Tetrahydrofura n	Urine	*	
Methyl ethyl ketone (CAS 78-93-3)	2 mg/l	MEK	Urine	*	

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation	
Cyclohexanone (CAS 108-94-1)	Can be absorbed through the skin.
US - Minnesota Haz Subs: Skin designation applies	
Cyclohexanone (CAS 108-94-1)	Skin designation applies.
US - Tennessee OELs: Skin designation	
Cyclohexanone (CAS 108-94-1)	Can be absorbed through the skin.
US ACGIH Threshold Limit Values: Skin designation	
Cyclohexanone (CAS 108-94-1)	Can be absorbed through the skin.
Furan, Tetrahydro- (CAS 109-99-9)	Can be absorbed through the skin.
US. NIOSH: Pocket Guide to Chemical Hazards	
Cyclohexanone (CAS 108-94-1)	Can be absorbed through the skin.

Appropriate engineering controls	Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.
Individual protection measures	s, such as personal protective equipment
Eye/face protection	Face shield is recommended. Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Translucent liquid.
Color	Clear.
Odor	Solvent.
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	151 °F (66.11 °C)
Flash point	-4.0 °F (-20.0 °C)
Evaporation rate	5.5 - 8
Flammability (solid, gas)	Not available.
Upper/lower flammability or exp	losive limits
Flammability limit - lower (%)	1.8
Flammability limit - upper (%)	11.8
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	145 mm Hg @ 20 C
Vapor density	2.5
Relative density	0.9 +/- 0.02
Solubility(ies)	
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	80 - 500 cP
Other information	
VOC (Weight %)	488 g/I SCAQMD 1168/M316A

10. Stability and reactivity

Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Information on toxicological effects

Acute toxicity	city May be fatal if swallowed and enters airways. Narcotic effects. May cause respirato		
Components	Species	Test Results	
Acetone (CAS 67-64-1)			
Acute			
Dermal			
LD50	Rabbit	20 ml/kg	
Inhalation			
LC50	Rat	50 mg/l, 8 Hours	
Oral			
LD50	Rat	5800 mg/kg	
Cyclohexanone (CAS 108-94-1)			
Acute			
Dermal			
LD50	Rabbit	948 mg/kg	
Inhalation			
LC50	Rat	8000 ppm, 4 hours	
Oral			
LD50	Rat	1540 mg/kg	
* Estimates for product may I	be based on additional component data no	t shown.	
Skin corrosion/irritation	Causes skin irritation.		
Serious eye damage/eye irritation	Causes serious eye irritation.		
Respiratory or skin sensitizatio	n		
Respiratory sensitization	Not available.		
Skin sensitization	This product is not expected to cause sl	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.		

Carcinogenicity

In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.

IARC Monographs. Overall Evaluation of Carcinogenicity

Cyclohexanone (CAS 108 Polyvinyl chloride (CAS 9 OSHA Specifically Regulate	,	
Polyvinyl chloride (CAS 9	S 9002-86-2) Cancer	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Narcotic effects. May cause drowsiness and dizziness. Respiratory tract irritation.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	May be fatal if swallowed and enters airways.	
Chronic effects	Prolonged inhalation may be harmful.	

12. Ecological information

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

	Species	Test Results
		-
LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
8-94-1)		
LC50	Fathead minnow (Pimephales promelas)	481 - 578 mg/l, 96 hours
,	8-94-1)	8-94-1)

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential	No data available.	
Partition coefficient n-octan	ol / water (log Kow)	
Acetone (CAS 67-64-1)		-0.24
Cyclohexanone (CAS 108-94-	1)	0.81
Furan, Tetrahydro- (CAS 109-	99-9)	0.46
Methyl ethyl ketone (CAS 78-9	93-3)	0.29

Mobility in soil No data available.

Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

PVC Regular Clear Cement

14. Transport information

DOT	
UN number	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (Methyl ethyl ketone RQ = 12788 LBS, Acetone RQ = 50505 LBS)
Transport hazard class(es)	
Class	3
Subsidiary risk	
Label(s)	3
Packing group	I
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB2, T7, TP1, TP8, TP28
Packaging exceptions	150
Packaging non bulk	202
Packaging bulk	242
ΙΑΤΑ	
UN number	UN1993
UN proper shipping name	Flammable liquid, n.o.s. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	
Packing group	II
Environmental hazards	No.
ERG Code	3H
	Read safety instructions, SDS and emergency procedures before handling.
IMDG	
UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-E
	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to	Not available.
Annex II of MARPOL 73/78 and	
the IBC Code	

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Polyvinyl chloride (CAS 9002-86-2)	Cancer Central nervous system Liver Blood Flammability
CERCLA Hazardous Substance List (40 CFR 302.4)	
Acetone (CAS 67-64-1)	LISTED
Cyclohexanone (CAS 108-94-1)	LISTED
Furan, Tetrahydro- (CAS 109-99-9)	LISTED
Methyl ethyl ketone (CAS 78-93-3)	LISTED

Superfund Amendments and Re	authorization Act of 1986 (SAI		
Hazard categories	Immediate Hazard - Yes		
nazaru categories	Delayed Hazard - No		
	Fire Hazard - Yes		
	Pressure Hazard - No		
SADA 202 Extremely becar	Reactivity Hazard - No		
SARA 302 Extremely hazarc Not listed.	ious substance		
SARA 311/312 Hazardous chemical	No		
SARA 313 (TRI reporting) Not regulated.			
Other federal regulations			
Clean Air Act (CAA) Section	112 Hazardous Air Pollutants	(HAPs) List	
Not regulated. Clean Air Act (CAA) Section	n 112(r) Accidental Release Pre	evention (40 CFR 68.130)	
Not regulated.			
Safe Drinking Water Act (SDWA)	Not regulated.		
Drug Enforcement Adm Chemical Code Number		ntial Chemicals (21 CFR 1310.02(b) and 1	310.04(f)(2) and
Acetone (CAS 67-64		6532	
Methyl ethyl ketone (. ,	6714	2 ()
-		kempt Chemical Mixtures (21 CFR 1310.1)	2(C))
Acetone (CAS 67-64 Methyl ethyl ketone (35 %WV 35 %WV	
DEA Exempt Chemical	Mixtures Code Number		
Acetone (CAS 67-64 Methyl ethyl ketone (6532 6714	
US state regulations			
US. Massachusetts RTK - S	ubstance List		
Acetone (CAS 67-64-1)			
Cyclohexanone (CAS 108	,		
Furan, Tetrahydro- (CAS			
Methyl ethyl ketone (CAS	o 78-93-3) I Community Right-to-Know Ad	ct	
Acetone (CAS 67-64-1)			
Cyclohexanone (CAS 108	8-94-1)		
Furan, Tetrahydro- (CAS			
Methyl ethyl ketone (CAS	,		
Polyvinyl chloride (CAS 9	nd Community Right-to-Know	law	
Acetone (CAS 67-64-1)			
Cyclohexanone (CAS 108	8-94-1)		
Furan, Tetrahydro- (CAS			
Methyl ethyl ketone (CAS US. Rhode Island RTK	; 78-93-3)		
Acetone (CAS 67-64-1)			
Cyclohexanone (CAS 104 Furan, Tetrahydro- (CAS			
Methyl ethyl ketone (CAS	; 78-93-3)		
US. California Proposition 6			
	Nater and Toxic Enforcement Ac isted as carcinogens or reproduc	ct of 1986 (Proposition 65): This material is r trive toxins.	not known to contain
International Inventories			
Country(s) or region	Inventory name		On inventory (yes/no)*
Canada	Domestic Substances List (DS	SL)	Yes

Country(s) or region

Inventory name

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	05-27-2015
Revision date	-
Version #	01
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0
NFPA ratings	2 0

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.



SAFETY DATA SHEET



1. Identification

1. Identification			
Product identifier	Oatey Purple Primer- NSF Listed for PVC a	nd CPVC	
Other means of identification			
Product code	1402E		
Synonyms	Part Numbers: 30755(TV), 30756(TV), 30757(TV), 30758, 30759, 30927	
Recommended use	Joining PVC Pipes		
Recommended restrictions	None known.		
Manufacturer/Importer/Supplier/	ier/Distributor information		
Company Name	Oatey Co.		
Address	4700 West 160th St.		
	Cleveland, OH 44135		
Telephone	216-267-7100		
E-mail	info@oatey.com		
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)		
Emergency First Aid			
Contact person	MSDS Coordinator		
2. Hazard(s) identification			
Physical hazards	Flammable liquids	Category 2	
Health hazards	Acute toxicity, oral	Category 4	
	Skin corrosion/irritation	Category 2	
	Serious eye damage/eye irritation	Category 2A	
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation	
	Specific target organ toxicity, single exposure	Category 3 narcotic effects	
	Aspiration hazard	Category 1	
OSHA defined hazards	Not classified.		
Label elements			
Signal word	Danger		
Hazard statement	Highly flammable liquid and vapor. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.		
Precautionary statement			
Prevention	Keep away from heat/sparks/open flames/hot surfaces No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after bendling. Do not opt deither and the product. Use only outdoors or in a		

handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

Response

Storage

Disposal Hazard(s) not otherwise classified (HNOC)

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

Supplemental information

Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Acetone	67-64-1	25-40
Cyclohexanone	108-94-1	25-40
Furan, Tetrahydro-	109-99-9	15-30
Methyl ethyl ketone	78-93-3	15-30

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures	
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.
5. Fire-fighting measures	
Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

6. Accidental release measures

. Accidental release measures			
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.		
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.		
	Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.		
	Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.		
Environmental precautions	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.		
7. Handling and storage			
Precautions for safe handling	Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.		
Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).		

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
		1000 ppm	
Cyclohexanone (CAS 108-94-1)	PEL	200 mg/m3	
		50 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	PEL	590 mg/m3	
,		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	PEL	590 mg/m3	
		200 ppm	
US. ACGIH Threshold Limit Value	S		
Components	Туре	Value	
Acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
Cyclohexanone (CAS 108-94-1)	STEL	50 ppm	
,	TWA	20 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	100 ppm	

US. ACGIH Threshold Limit Values

Components	Туре	Value	
	TWA	50 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	
US. NIOSH: Pocket Guide to Che	mical Hazards		
Components	Туре	Value	
Acetone (CAS 67-64-1)	TWA	590 mg/m3	
		250 ppm	
Cyclohexanone (CAS 108-94-1)	TWA	100 mg/m3	
		25 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	735 mg/m3	
		250 ppm	
	TWA	590 mg/m3	
		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	885 mg/m3	
		300 ppm	
	TWA	590 mg/m3	
		200 ppm	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time	
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*	
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexan ediol, with hydrolysis	Urine	*	
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*	
Furan, Tetrahydro- (CAS 109-99-9)	2 mg/l	Tetrahydrofura n	Urine	*	
Methyl ethyl ketone (CAS 78-93-3)	2 mg/l	MEK	Urine	*	

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin	decignation	
03 - California OELS. Skin	designation	
Cyclohexanone (CAS 1	08-94-1)	Can be absorbed through the skin.
US - Minnesota Haz Subs:	Skin designation applies	
Cyclohexanone (CAS 1	08-94-1)	Skin designation applies.
US - Tennessee OELs: Ski	n designation	c
Cyclohexanone (CAS 108-94-1)		Can be absorbed through the skin.
US ACGIH Threshold Limi	t Values: Skin designation	C C
Cyclohexanone (CAS 108-94-1)		Can be absorbed through the skin.
Furan, Tetrahydro- (CAS 109-99-9)		Can be absorbed through the skin.
US. NIOSH: Pocket Guide	to Chemical Hazards	
Cyclohexanone (CAS 108-94-1)		Can be absorbed through the skin.
Appropriate engineering controls	Explosion-proof general and local exhaust ventilation. Good general v changes per hour) should be used. Ventilation rates should be match applicable, use process enclosures, local exhaust ventilation, or other	

entilation (typically 10 air ed to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Face shield is recommended. Wear safety glasses with side shields (or goggles).

Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Appearance	
Physical state	Liquid.
Form	Translucent liquid.
Color	Purple
Odor	Solvent.
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	151 °F (66.11 °C)
Flash point	14.0 - 23.0 °F (-10.05.0 °C)
Evaporation rate	5.5 - 8
Flammability (solid, gas)	Not available.
Upper/lower flammability or exp	losive limits
Flammability limit - lower (%)	1.8
Flammability limit - upper (%)	11.8
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	145 mm Hg @ 20 C
Vapor density	2.5
Relative density	0.84 +/- 0.02 @20°C
Solubility(ies)	
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Bulk density	7 lb/gal
VOC (Weight %)	505 g/I SQACMD Method 24

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.		
Skin contact	Causes skin irritation.		
Eye contact	Causes serious eye irritation.		
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.		
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.		

Information on toxicological effects

Acute toxicity

May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.

Components	Species Test Results		
Acetone (CAS 67-64-1)			
Acute			
Dermal			
LD50	Rabbit	20 ml/kg	
Inhalation			
LC50	Rat	50 mg/l, 8 Hours	
Oral			
LD50	Rat	5800 mg/kg	
Cyclohexanone (CAS 108-94-1)		
Acute			
Dermal			
LD50	Rabbit	948 mg/kg	
Inhalation			
LC50	Rat	8000 ppm, 4 hours	
Oral			
LD50	Rat	1540 mg/kg	
* Estimates for product ma	y be based on additional component data	a not shown.	
kin corrosion/irritation	Causes skin irritation.		
Serious eye damage/eye rritation	Causes serious eye irritation.		
Respiratory or skin sensitization	tion		
Respiratory sensitization			
Skin sensitization	This product is not expected to cause	se skin sensitization	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.		
Carcinogenicity	lifetime study on THF conducted by mice developed liver tumors while n results. Because the carcinogenic n either tumor, the EPA determined th assessment of carcinogenic potentia data in aggregate indicate that there	In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation fetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female nice developed liver tumors while neither the female rats nor the male mice showed similar esults. Because the carcinogenic mechanisms could not be identified clearly in either species for ither tumor, the EPA determined that the male rat and female mouse findings are relevant to the ssessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these lata in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following xposure to THF by all routes of exposure.	

Cyclohexanone (CAS 108-94-1)

3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulate Not listed.	d Substances (29 CFR 1910.1001-1050)
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Narcotic effects. May cause drowsiness and dizziness. Respiratory tract irritation.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecoto	xicitv
LOOID	Aloity.

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

	1 2	5 1 1	5 5
Components		Species	Test Results
Acetone (CAS 67-64-	-1)		
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)) > 100 mg/l, 96 hours
Cyclohexanone (CAS	S 108-94-1)		
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)) 481 - 578 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.				
Persistence and degradability	No data is available on the degradability of this product.			
Bioaccumulative potential	No data available.			
Partition coefficient n-octar	iol / water (log Kow)			
Acetone (CAS 67-64-1)		-0.24		
Cyclohexanone (CAS 108-94-1) 0.81				
Furan, Tetrahydro- (CAS 109-99-9) 0.46		0.46		
Methyl ethyl ketone (CAS 78-93-3) 0.29				
Mobility in soil	No data available.			
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.			
13. Disposal considerations				
Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international			

	regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT	
UN number	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (Methyl ethyl ketone RQ = 26274 LBS, Acetone RQ = 13130 LBS)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	II

Special precautions for user Special provisions Packaging exceptions Packaging non bulk Packaging bulk IATA	Read safety instructions, SDS and emergency procedures before handling. IB2, T7, TP1, TP8, TP28 150 202 242
UN number	UN1993
UN proper shipping name	Flammable liquid, n.o.s. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	3H
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
IMDG	
UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	Ш
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-E
Special precautions for user Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Read safety instructions, SDS and emergency procedures before handling. Not available.
15. Regulatory information	
US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1)	LISTED
Cyclohexanone (CAS 108-94-1)	LISTED
Furan, Tetrahydro- (CAS 109-99-9)	LISTED
Methyl ethyl ketone (CAS 78-93-3)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories Immediate Hazard - Yes

No

Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations	440 Hanandava Air Dallutan		
Clean Air Act (CAA) Section	112 Hazardous Air Pollutan	ts (HAPS) List	
Not regulated. Clean Air Act (CAA) Section	112(r) Accidental Release P	revention (40 CFR 68.130)	
Not regulated.			
Safe Drinking Water Act (SDWA)	Not regulated.		
Drug Enforcement Adm Chemical Code Number		ential Chemicals (21 CFR 1310.02(b) and	1310.04(f)(2) and
Acetone (CAS 67-64	-1)	6532 6714	
Methyl ethyl ketone (Drug Enforcement Adm		Exempt Chemical Mixtures (21 CFR 1310)	.12(c))
Acetone (CAS 67-64		35 %WV	
Methyl ethyl ketone (35 %WV	
DEA Exempt Chemical	Mixtures Code Number		
Acetone (CAS 67-64	-1)	6532	
Methyl ethyl ketone (CAS 78-93-3)	6714	
US state regulations			
US. Massachusetts RTK - Si	ubstance List		
Acetone (CAS 67-64-1) Cyclohexanone (CAS 108 Furan, Tetrahydro- (CAS			
Methyl ethyl ketone (CAS			
US. New Jersey Worker and	,	Act	
Acetone (CAS 67-64-1)	<i>, c</i>		
Cyclohexanone (CAS 108	3-94-1)		
Furan, Tetrahydro- (CAS			
Methyl ethyl ketone (CAS			
US. Pennsylvania Worker ar	nd Community Right-to-Know	w Law	
Acetone (CAS 67-64-1)			
Cyclohexanone (CAS 108 Furan, Tetrahydro- (CAS			
Methyl ethyl ketone (CAS			
US. Rhode Island RTK			
Acetone (CAS 67-64-1)			
Cyclohexanone (CAS 108	3-94-1)		
Furan, Tetrahydro- (CAS	,		
Methyl ethyl ketone (CAS	5 78-93-3)		
US. California Proposition 6			
	Vater and Toxic Enforcement <i>i</i> sted as carcinogens or reprod	Act of 1986 (Proposition 65): This material is uctive toxins.	not known to contain
International Inventories			
Country(s) or region	Inventory name		On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
United States & Puerto Rico	Toxic Substances Control A	ct (TSCA) Inventory	Yes
		nents administered by the governing country(s). ot listed or exempt from listing on the inventory ac	Iministered by the governing
16. Other information, incl	uding date of preparati	on or last revision	
Issue date	27-May-2015		
	21-1VIQy-2010		
Revision date	-		

Revision date	-
Version #	01
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0



Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.





SAFETY DATA SHEET

1 Identification

1. Identification		
Product identifier	Oatey CPVC Flowguard Gold UVI One-Step	Yellow Cement
Other means of identification		
Product code	1203E	
Synonyms	Part Numbers: 31910(TV), 31911(TV), 31912, 32203, 31660, 31661, 31662, 31663, 31917, 3	31913, 31914, 31656, 31657, 32200, 32201, 32202, 31918, 31919
Recommended use	Joining CPVC Pipes	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/	Distributor information	
Company Name	Oatey Co.	
Address	4700 West 160th St.	
	Cleveland, OH 44135	
Telephone	216-267-7100	
E-mail	info@oatey.com	
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the U	S 1-703-527-3887)
Emergency First Aid	1-877-740-5015	,
Contact person	MSDS Coordinator	
2. Hazard(s) identification		
Physical hazards	Flammable liquids	Category 2
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
OSHA defined hazards	Not classified.	
Label elements		
Signal word	Danger	
Hazard statement		swallowed. May be fatal if swallowed and enters s eye irritation. May cause respiratory irritation. May
Precautionary statement		
Prevention	Keep away from heat/sparks/open flames/hot closed. Ground/bond container and receiving a	surfaces No smoking. Keep container tightly equipment. Use explosion-proof

closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response	If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.
Storage	Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

Supplemental information

Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Furan, Tetrahydro-	109-99-9	30-60
Methyl ethyl ketone	78-93-3	10-30
Ethene, chloro-, homopolymer, chlorinated	68648-82-8	10-20
Acetone	67-64-1	5-15
Cyclohexanone	108-94-1	5-15
Silica, amorphous, fumed	112945-52-5	1-5

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.
5. Fire-fighting measures	
Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

the chemical

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.
6. Accidental release meas	sures
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.
	Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.
	Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage	
Precautions for safe handling	Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
		1000 ppm	
Cyclohexanone (CAS 108-94-1)	PEL	200 mg/m3	
,		50 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	PEL	590 mg/m3	
,		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	PEL	590 mg/m3	
,		200 ppm	
US. OSHA Table Z-3 (29 CFR 1910	0.1000)		
Components	Туре	Value	
Silica, amorphous, fumed (CAS 112945-52-5)	TWA	0.8 mg/m3	

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Туре	Value	
		20 mppcf	
US. ACGIH Threshold Limit Value	es		
Components	Туре	Value	
Acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
Cyclohexanone (CAS 108-94-1)	STEL	50 ppm	
	TWA	20 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	100 ppm	
	TWA	50 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	
US. NIOSH: Pocket Guide to Che	mical Hazards		
Components	Туре	Value	
Acetone (CAS 67-64-1)	TWA	590 mg/m3	
		250 ppm	
Cyclohexanone (CAS 108-94-1)	TWA	100 mg/m3	
		25 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	735 mg/m3	
		250 ppm	
	TWA	590 mg/m3	
		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	885 mg/m3	
		300 ppm	
	TWA	590 mg/m3	
		200 ppm	
Silica, amorphous, fumed (CAS 112945-52-5)	TWA	6 mg/m3	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time	
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*	
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexan ediol, with hydrolysis	Urine	*	
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*	
Furan, Tetrahydro- (CAS 109-99-9)	2 mg/l	Tetrahydrofura n	Urine	*	
Methyl ethyl ketone (CAS 78-93-3)	2 mg/l	MEK	Urine	*	

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

Cyclohexanone (CAS 108-94-1)

US - Minnesota Haz Subs: Skin designation applies Cyclohexanone (CAS 108-94-1) Can be absorbed through the skin.

Skin designation applies.

US - Tennessee OELs: Skin	designation		
Cyclohexanone (CAS 108-94-1)		Can be absorbed through the skin.	
US ACGIH Threshold Limit	values: Skin designation		
Cyclohexanone (CAS 10		Can be absorbed through the skin.	
Furan, Tetrahydro- (CAS	5 109-99-9)	Can be absorbed through the skin.	
US. NIOSH: Pocket Guide to	o Chemical Hazards		
Cyclohexanone (CAS 108-94-1)		Can be absorbed through the skin.	
Appropriate engineering controls	Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.		
Individual protection measures,	, such as personal protective	equipment	
Eye/face protection	Face shield is recommended.	Wear safety glasses with side shields (or goggles).	
Skin protection			
Hand protection	Wear appropriate chemical resistant gloves.		
Other	Wear appropriate chemical re	sistant clothing.	
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.		
Thermal hazards	Wear appropriate thermal pro	Wear appropriate thermal protective clothing, when necessary.	
General hygiene considerations	as washing after handling the	or smoke. Always observe good personal hygiene measures, such material and before eating, drinking, and/or smoking. Routinely wash equipment to remove contaminants.	

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Translucent liquid.
Color	Yellow / Gold
Odor	Solvent.
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling	151 °F (66.11 °C)
range Flash point	14.0 - 23.0 °F (-10.05.0 °C)
-	5.5 - 8
Evaporation rate	S.S - 8 Not available.
Flammability (solid, gas)	
Upper/lower flammability or expl	
Flammability limit - lower (%)	1.8
Flammability limit - upper (%)	11.8
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	145 mm Hg @ 20 C
Vapor density	2.5
Relative density	0.94 +/- 0.02
Solubility(ies)	
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.

Decomposition temperature	Not available.
Viscosity	500 - 1500 cP
Other information	
Bulk density	7.8 lb/gal
VOC (Weight %)	470 g/l SQACMD 1168/M316A

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Information on toxicological effects

Acute toxicity	May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.	
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Components	Species	Test Results
Acetone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	20 ml/kg
Inhalation		
LC50	Rat	50 mg/l, 8 Hours
Oral		
LD50	Rat	5800 mg/kg
Cyclohexanone (CAS 108-94-1))	
Acute		
Dermal		
LD50	Rabbit	948 mg/kg
Inhalation		
LC50	Rat	8000 ppm, 4 hours
Oral		
LD50	Rat	1540 mg/kg
* Estimates for product may	y be based on additional component data not s	shown.
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Causes serious eye irritation.	

Respiratory or skin sensitization	า			
Respiratory sensitization	Not available.			
Skin sensitization	This product is not expected to cause skin sensitization.			
Germ cell mutagenicity		No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.		
Carcinogenicity	In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.			
IARC Monographs. Overall		Carcinogenicity		
Cyclohexanone (CAS 10 Silica, amorphous, fumeo OSHA Specifically Regulate Not listed.	d (CAS 112945-	· ·	3 Not classifiable as to ca 3 Not classifiable as to ca 001-1050)	
Reproductive toxicity	This product	is not expected t	o cause reproductive or dev	velopmental effects.
Specific target organ toxicity - single exposure	Narcotic effe	cts. May cause d	rowsiness and dizziness. R	espiratory tract irritation.
Specific target organ toxicity - repeated exposure	Not classified	J.		
Aspiration hazard	May be fatal	if swallowed and	enters airways.	
Chronic effects	Prolonged in	halation may be l	narmful.	
12. Ecological information				
Ecotoxicity				us. However, this does not exclude the l or damaging effect on the environment.
Components		Species		Test Results
Acetone (CAS 67-64-1) Aquatic Fish	LC50	Eathood minne	ow (Pimephales promelas)	> 100 mg/L 06 hours
Cyclohexanone (CAS 108-94 Aquatic		Fatheau minne	ow (Finiephales prometas)	
-	LC50	Fathead minne	ow (Pimephales promelas)	481 - 578 mg/l, 96 hours
* Estimates for product may b	e based on add	ditional compone	nt data not shown.	
Persistence and degradability	No data is av	ailable on the de	gradability of this product.	
Bioaccumulative potential	No data avail	lable.		
Partition coefficient n-octan Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94 Furan, Tetrahydro- (CAS 109- Methyl ethyl ketone (CAS 78-	-1) -99-9)	Kow)	-0.24 0.81 0.46 0.29	
Mobility in soil	No data avail	lable.	0.20	
Other adverse effects				etion, photochemical ozone creation are expected from this component.
13. Disposal consideration	ns			
Disposal instructions	Collect and re and its contains sewers/water	iner must be disp r supplies. Do no	osed of as hazardous wast t contaminate ponds, water	ensed waste disposal site. This material te. Do not allow this material to drain into ways or ditches with chemical or used vith local/regional/national/international
Local disposal regulations			l applicable regulations	

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

DOT		
UN number	ι	UN1993
UN proper shipp	ing name	Flammable liquids, n.o.s. (Methyl ethyl ketone RQ = 23310 LBS, Acetone RQ = 50000 LBS)
Transport hazar	d class(es)	
Class	3	3
Subsidiary r	isk -	
Label(s)	3	3
Packing group		II
		Read safety instructions, SDS and emergency procedures before handling.
Special provisio		IB2, T7, TP1, TP8, TP28
Packaging exce		150
Packaging non b		202
Packaging bulk	2	242
ΙΑΤΑ		
UN number		UN1993
UN proper shipp	-	Flammable liquid, n.o.s. (Methyl ethyl ketone, Acetone)
Transport hazar		
Class		3
Subsidiary r	isk -	
Packing group	-	
Environmental h		No.
ERG Code	-	3H
	ons for user	Read safety instructions, SDS and emergency procedures before handling.
IMDG		
UN number		UN1993
UN proper shipp		FLAMMABLE LIQUID, N.O.S. (Methyl ethyl ketone, Acetone)
Transport hazar		
Class		3
Subsidiary r		
Packing group		
Environmental h	azards	
Marine pollu		No.
EmS		F-E, S-E
		Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk ac Annex II of MARPOL the IBC Code	•	Not available.
15 Pogulatory in	formation	

15. Regulatory information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.		
Not regulated.	Notification (40 CFR 707, Subpt. D) d Substances (29 CFR 1910.1001-1050)		
Not listed. CERCLA Hazardous Substa			
Acetone (CAS 67-64-1) Cyclohexanone (CAS 103 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS	109-99-9) LISTED		

Superfund Amendments and Re	authorization Act of 1986 (S	ARA)	
Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No	,	
SARA 302 Extremely hazard Not listed.	dous substance		
SARA 311/312 Hazardous chemical	No		
SARA 313 (TRI reporting) Not regulated.			
Other federal regulations			
-	112 Hazardous Air Pollutan	ts (HAPs) List	
Not regulated. Clean Air Act (CAA) Section	n 112(r) Accidental Release P	revention (40 CFR 68.130)	
Not regulated.			
Safe Drinking Water Act (SDWA)	Not regulated.		
Drug Enforcement Adm Chemical Code Number		ential Chemicals (21 CFR 1310.02(b) an	d 1310.04(f)(2) and
Acetone (CAS 67-64		6532	
Methyl ethyl ketone (6714 Exempt Chemical Mixtures (21 CEP 121	0.12(a))
Acetone (CAS 67-64		Exempt Chemical Mixtures (21 CFR 131 35 %WV	0.12(0))
Methyl ethyl ketone (DEA Exempt Chemical	(CAS 78-93-3)	35 %WV	
Acetone (CAS 67-64 Methyl ethyl ketone (6532 6714	
US state regulations			
US. Massachusetts RTK - S	ubstance List		
Acetone (CAS 67-64-1) Cyclohexanone (CAS 100 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS Silica, amorphous, fumed US. New Jersey Worker and	109-99-9) 5 78-93-3)	Act	
Acetone (CAS 67-64-1) Cyclohexanone (CAS 104 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS	109-99-9) 5 78-93-3)		
Acetone (CAS 67-64-1)	nd Community Right-to-Knov	W Law	
Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS Silica, amorphous, fumed	109-99-9) 5 78-93-3)		
US. Rhode Island RTK			
Acetone (CAS 67-64-1) Cyclohexanone (CAS 106 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS	109-99-9)		
US. California Proposition 6			
California Safe Drinking \		Act of 1986 (Proposition 65): This material	is not known to contain
International Inventories	isted as cardinogens of reprodi		
	Inventory name		On inventory (vector)*
Country(s) or region Canada	Inventory name Domestic Substances List (E	DSL)	On inventory (yes/no)* Yes

Country(s) or region

Inventory name

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	27-May-2015
Revision date	-
Version #	01
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0
NFPA ratings	2 0

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.





SAFETY DATA SHEET

1. Identification

Product identifier	Oatey CPVC Heavy Duty Orange		
Other means of identification			
Product code	1202E		
Synonyms	Part Numbers: 31082, 31083, 31084		
Recommended use	Joining CPVC Pipes		
Recommended restrictions	None known.		
Manufacturer/Importer/Supplier	/Distributor information		
Company Name	Oatey Co.		
Address	4700 West 160th St.		
	Cleveland, OH 44135		
Telephone	216-267-7100		
E-mail	info@oatey.com		
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)		
Emergency First Aid	1-877-740-5015		
Contact person	MSDS Coordinator		
2. Hazard(s) identification			

• •			
Physical hazards	Flammable liquids	Category 2	
Health hazards	Acute toxicity, oral	Category 4	
	Skin corrosion/irritation	Category 2	
	Serious eye damage/eye irritation	Category 2A	
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation	
	Specific target organ toxicity, single exposure	Category 3 narcotic effects	
	Aspiration hazard	Category 1	
OSHA defined hazards	Not classified.		
Label elements			
Signal word	Danger		
Hazard statement	Highly flammable liquid and vapor. Harmful if swallowed. May be fatal if swallowed and en		
	airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.		
Precautionary statement			
Prevention	Keep away from heat/sparks/open flames/hot surfaces No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.		
Response	If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all		

If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

Storage

Disposal

Hazard(s) not otherwise classified (HNOC)

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

Supplemental information

Not applicable.

3. Composition/information on ingredients

Mixtures

CAS number	
109-99-9	50-70
68648-82-8	10-20
67-64-1	5-15
108-94-1	5-15
112945-52-5	1-5

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.
5. Fire-fighting measures	
Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.		
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.		
	Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.		
	Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.		
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.		
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.		
7. Handling and storage			
Precautions for safe handling	Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.		
Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).		

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
		1000 ppm	
Cyclohexanone (CAS 108-94-1)	PEL	200 mg/m3	
		50 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	PEL	590 mg/m3	
,		200 ppm	
US. OSHA Table Z-3 (29 CFR 191	0.1000)		
Components	Туре	Value	
Silica, amorphous, fumed (CAS 112945-52-5)	TWA	0.8 mg/m3	
· · · · · · · · · · · · · · · · · · ·		20 mppcf	
US. ACGIH Threshold Limit Valu	es		
Components	Туре	Value	
Acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
Cyclohexanone (CAS 108-94-1)	STEL	50 ppm	

US. ACGIH Threshold Limit Values

Components	Туре	Value	
	TWA	20 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	100 ppm	
,	TWA	50 ppm	
US. NIOSH: Pocket Guide to Che	mical Hazards		
Components	Туре	Value	
Acetone (CAS 67-64-1)	TWA	590 mg/m3	
		250 ppm	
Cyclohexanone (CAS 108-94-1)	TWA	100 mg/m3	
		25 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	735 mg/m3	
		250 ppm	
	TWA	590 mg/m3	
		200 ppm	
Silica, amorphous, fumed (CAS 112945-52-5)	TWA	6 mg/m3	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexan ediol, with hydrolysis	Urine	*
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*
Furan, Tetrahydro- (CAS 109-99-9)	2 mg/l	Tetrahydrofura n	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin	designation		
Cyclohexanone (CAS 108-94-1)		Can be absorbed through the skin.	
US - Minnesota Haz Subs:	Skin designation applies	S	
Cyclohexanone (CAS 1	08-94-1)	Skin designation applies.	
US - Tennessee OELs: Ski	n designation		
Cyclohexanone (CAS 1	08-94-1)	Can be absorbed through the skin.	
US ACGIH Threshold Limi	t Values: Skin designatio	on	
Cyclohexanone (CAS 1	08-94-1)	Can be absorbed through the skin.	
Furan, Tetrahydro- (CA	S 109-99-9)	Can be absorbed through the skin.	
US. NIOSH: Pocket Guide	to Chemical Hazards		
Cyclohexanone (CAS 108-94-1)		Can be absorbed through the skin.	
Appropriate engineering controls	Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.		
Individual protection measures	s, such as personal prote	ective equipment	
Eye/face protection	Face shield is recommended. Wear safety glasses with side shields (or goggles).		
Skin protection			

Hand protectionWear appropriate chemical resistant gloves.OtherWear appropriate chemical resistant clothing.Respiratory protectionIf engineering controls do not maintain airborne concentrations below recommended exposure
limits (where applicable) or to an acceptable level (in countries where exposure limits have not
been established), an approved respirator must be worn.

Oatey CPVC Heavy Duty Orange

Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

• •	•
Appearance	
Physical state	Liquid.
Form	Translucent liquid.
Color	Orange
Odor	Solvent.
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	151 °F (66.11 °C)
Flash point	14.0 - 23.0 °F (-10.05.0 °C)
Evaporation rate	5.5 - 8
Flammability (solid, gas)	Not available.
Upper/lower flammability or expl	osive limits
Flammability limit - lower (%)	1.8
Flammability limit - upper (%)	11.8
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	145 mm Hg @ 20 C
Vapor density	2.5
Relative density	0.97 +/- 0.02
Solubility(ies)	
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	500 - 1500 cP
Other information	
Bulk density	8.1 lb/gal
VOC (Weight %)	467 g/l SQACMD 1168/M316A
10. Stability and reactivity	

-	·
Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Information on toxicological effects

Acute toxicity

May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.

,		
Components	Species	Test Results
Acetone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	20 ml/kg
Inhalation		
LC50	Rat	50 mg/l, 8 Hours
Oral		
LD50	Rat	5800 mg/kg
Cyclohexanone (CAS 108-94-1)		
Acute		
Dermal		
LD50	Rabbit	948 mg/kg
Inhalation		
LC50	Rat	8000 ppm, 4 hours
Oral		
LD50	Rat	1540 mg/kg
* Estimates for product may b	be based on additional component data not sh	nown.
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye rritation	Causes serious eye irritation.	
Respiratory or skin sensitizatio	n	
Respiratory sensitization	Not available.	
Skin sensitization	This product is not expected to cause skin	sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.	
IARC Monographs. Overall	Evaluation of Carcinogenicity	
Ovelah avenana (CAC 40		ifiable as to estain equivient to burnous

Cyclohexanone (CAS 108-94-1)		
Silica, amorphous, fumed (CAS 112945-52-5)		

3 Not classifiable as to carcinogenicity to humans.3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulate Not listed.	d Substances (29 CFR 1910.1001-1050)
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Narcotic effects. May cause drowsiness and dizziness. Respiratory tract irritation.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecoto	xicitv
LOOID	Aloity.

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Acetone (CAS 67-64-	1)		
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas	s) > 100 mg/l, 96 hours
Cyclohexanone (CAS	108-94-1)		
Aquatic			
Aquallo			

r el sistence anu degrada	Dilly NO data is available (on the degradability of this product.	
Bioaccumulative potentia	al No data available.		
Partition coefficient	n-octanol / water (log Kow)		
Acetone (CAS 67-64-2	1)	-0.24	
Cyclohexanone (CAS	108-94-1)	0.81	
Furan, Tetrahydro- (C	AS 109-99-9)	0.46	
Mobility in soil	No data available.		

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT	
UN number	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (Acetone RQ = 49702 LBS)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Special provisions	IB2, T7, TP1, TP8, TP28
Packaging exceptions	150
Packaging non bulk	202
Packaging bulk	242
IATA	
UN number	UN1993
UN proper shipping name	Flammable liquid, n.o.s. (Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	5 -
	-
Packing group Environmental hazards	No.
ERG Code	3H
	r Read safety instructions, SDS and emergency procedures before handling.
IMDG	
UN number	UN1993
UN proper shipping name Transport hazard class(es)	FLAMMABLE LIQUID, N.O.S. (Acetone)
Class	3
Subsidiary risk	-
Packing group	11
Environmental hazards	A1-
Marine pollutant	No.
EmS	F-E, S-E r Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to	Not available.
	Not available.
Annex II of MARPOL 73/78 and the IBC Code	
the IBC Code	n This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.
the IBC Code 15. Regulatory informatio US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.
the IBC Code 15. Regulatory informatio US federal regulations TSCA Section 12(b) Export	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
the IBC Code 15. Regulatory informations US federal regulations TSCA Section 12(b) Export Not regulated.	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. Notification (40 CFR 707, Subpt. D)
the IBC Code 15. Regulatory information US federal regulations TSCA Section 12(b) Export Not regulated. OSHA Specifically Regulate	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.
the IBC Code 15. Regulatory information US federal regulations TSCA Section 12(b) Export Not regulated. OSHA Specifically Regulated Not listed.	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. Notification (40 CFR 707, Subpt. D) ed Substances (29 CFR 1910.1001-1050)
the IBC Code 15. Regulatory information US federal regulations TSCA Section 12(b) Export Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substa	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. Notification (40 CFR 707, Subpt. D) ed Substances (29 CFR 1910.1001-1050) ance List (40 CFR 302.4)
the IBC Code 15. Regulatory information US federal regulations TSCA Section 12(b) Export Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substat Acetone (CAS 67-64-1)	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. Notification (40 CFR 707, Subpt. D) ed Substances (29 CFR 1910.1001-1050) ance List (40 CFR 302.4) LISTED
the IBC Code 15. Regulatory information US federal regulations TSCA Section 12(b) Export Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substant Acetone (CAS 67-64-1) Cyclohexanone (CAS 10	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. Notification (40 CFR 707, Subpt. D) ed Substances (29 CFR 1910.1001-1050) ance List (40 CFR 302.4) ISTED ISTED ISTED ISTED
the IBC Code 15. Regulatory information US federal regulations TSCA Section 12(b) Export Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substa Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. Notification (40 CFR 707, Subpt. D) ed Substances (29 CFR 1910.1001-1050) ance List (40 CFR 302.4) ISTED B-94-1) ISTED LISTED LISTED
the IBC Code 15. Regulatory information US federal regulations TSCA Section 12(b) Export Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substa Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Superfund Amendments and R	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. Notification (40 CFR 707, Subpt. D) ed Substances (29 CFR 1910.1001-1050) ance List (40 CFR 302.4) ISTED ISTED ISTED ISTED ISTED authorization Act of 1986 (SARA)
the IBC Code 15. Regulatory information US federal regulations TSCA Section 12(b) Export Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substa Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. Notification (40 CFR 707, Subpt. D) ed Substances (29 CFR 1910.1001-1050) ance List (40 CFR 302.4) Be-94-1) ISTED ISTED LISTED LISTED LISTED LISTED LISTED LISTED ISTED
the IBC Code 15. Regulatory information US federal regulations TSCA Section 12(b) Export Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substa Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Superfund Amendments and R	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. Notification (40 CFR 707, Subpt. D) ed Substances (29 CFR 1910.1001-1050) ance List (40 CFR 302.4) Be-94-1) ISTED LISTED LISTED eauthorization Act of 1986 (SARA) Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes
the IBC Code 15. Regulatory information US federal regulations TSCA Section 12(b) Export Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substa Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Superfund Amendments and R	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. Notification (40 CFR 707, Subpt. D) ed Substances (29 CFR 1910.1001-1050) ance List (40 CFR 302.4) Be-94-1) LISTED Be-94-1) LISTED LISTED Beauthorization Act of 1986 (SARA) Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No
the IBC Code 15. Regulatory information US federal regulations TSCA Section 12(b) Export Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substa Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Superfund Amendments and R	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. Notification (40 CFR 707, Subpt. D) ed Substances (29 CFR 1910.1001-1050) ance List (40 CFR 302.4) Be-94-1) ISTED LISTED LISTED eauthorization Act of 1986 (SARA) Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes
the IBC Code 15. Regulatory information US federal regulations TSCA Section 12(b) Export Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substa Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Superfund Amendments and R	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. Notification (40 CFR 707, Subpt. D) ed Substances (29 CFR 1910.1001-1050) ance List (40 CFR 302.4) LISTED 8-94-1) LISTED 109-99-9) LISTED Eauthorization Act of 1986 (SARA) Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
the IBC Code 15. Regulatory information US federal regulations TSCA Section 12(b) Export Not regulated. OSHA Specifically Regulate Not listed. CERCLA Hazardous Subst Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Superfund Amendments and R Hazard categories	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. Notification (40 CFR 707, Subpt. D) ed Substances (29 CFR 1910.1001-1050) ance List (40 CFR 302.4) LISTED 8-94-1) LISTED 109-99-9) LISTED Eauthorization Act of 1986 (SARA) Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
the IBC Code 15. Regulatory information US federal regulations TSCA Section 12(b) Export Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substa Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Superfund Amendments and R Hazard categories	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. Notification (40 CFR 707, Subpt. D) ed Substances (29 CFR 1910.1001-1050) ance List (40 CFR 302.4) LISTED 8-94-1) LISTED 109-99-9) LISTED Eauthorization Act of 1986 (SARA) Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
the IBC Code 15. Regulatory information US federal regulations TSCA Section 12(b) Export Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substa Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Superfund Amendments and R Hazard categories SARA 302 Extremely hazar Not listed.	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. Notification (40 CFR 707, Subpt. D) ed Substances (29 CFR 1910.1001-1050) ance List (40 CFR 302.4) LISTED 8-94-1) LISTED 109-99-9) LISTED eauthorization Act of 1986 (SARA) Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Reactivity Hazard - No

SARA 313 (TRI reporting) Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated. Safe Drinking Water Act Not regulated. (SDWA) Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and **Chemical Code Number** Acetone (CAS 67-64-1) 6532 Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) Acetone (CAS 67-64-1) 35 %WV **DEA Exempt Chemical Mixtures Code Number** Acetone (CAS 67-64-1) 6532 **US state regulations US. Massachusetts RTK - Substance List** Acetone (CAS 67-64-1) Cvclohexanone (CAS 108-94-1) Furan. Tetrahydro- (CAS 109-99-9) Silica, amorphous, fumed (CAS 112945-52-5) US. New Jersey Worker and Community Right-to-Know Act Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) US. Pennsylvania Worker and Community Right-to-Know Law Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Silica, amorphous, fumed (CAS 112945-52-5) US. Rhode Island RTK Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) **US.** California Proposition 65 California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. International Inventories Country(s) or region Inventory name On inventory (yes/no)* Domestic Substances List (DSL) Canada Yes United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory No *A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s). 16. Other information, including date of preparation or last revision Issue date 27-May-2015 **Revision date** Version # 01 HMIS® ratings Health: 2 Flammability: 3 Physical hazard: 0 **NFPA** ratings

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

Supplemental information

Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Acetone	67-64-1	30-60
Cyclohexanone	108-94-1	15-40
Furan, Tetrahydro-	109-99-9	10-30
Methyl ethyl ketone	78-93-3	10-30

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.
5. Fire-fighting measures	
Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

6. Accidental release measures

Personal precautions,	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of
protective equipment and	low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area).
emergency procedures	Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or
	vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective
	clothing. Ventilate closed spaces before entering them. Local authorities should be advised if
	significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.
	Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.
	Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage	
Precautions for safe handling	Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
		1000 ppm	
Cyclohexanone (CAS 108-94-1)	PEL	200 mg/m3	
,		50 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	PEL	590 mg/m3	
,		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	PEL	590 mg/m3	
,		200 ppm	
US. ACGIH Threshold Limit Value	S		
Components	Туре	Value	
Acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
Cyclohexanone (CAS 108-94-1)	STEL	50 ppm	
,	TWA	20 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	100 ppm	
,	TWA	50 ppm	
Methyl ethyl ketone (CAS	STEL	300 ppm	
78-93-3)	0.11		

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Туре	Value	
Acetone (CAS 67-64-1)	TWA	590 mg/m3	
		250 ppm	
Cyclohexanone (CAS 108-94-1)	TWA	100 mg/m3	
		25 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	735 mg/m3	
,		250 ppm	
	TWA	590 mg/m3	
		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	885 mg/m3	
,		300 ppm	
	TWA	590 mg/m3	
		200 ppm	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time	
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*	
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexan ediol, with hydrolysis	Urine	*	
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*	
Furan, Tetrahydro- (CAS 109-99-9)	2 mg/l	Tetrahydrofura n	Urine	*	
Methyl ethyl ketone (CAS 78-93-3)	2 mg/l	MEK	Urine	*	

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation	
Cyclohexanone (CAS 108-94-1)	Can be absorbed through the skin.
US - Minnesota Haz Subs: Skin designation appl	ies
Cyclohexanone (CAS 108-94-1)	Skin designation applies.
US - Tennessee OELs: Skin designation	
Cyclohexanone (CAS 108-94-1)	Can be absorbed through the skin.
US ACGIH Threshold Limit Values: Skin designation	tion
Cyclohexanone (CAS 108-94-1)	Can be absorbed through the skin.
Furan, Tetrahydro- (CAS 109-99-9)	Can be absorbed through the skin.
US. NIOSH: Pocket Guide to Chemical Hazards	
Cyclohexanone (CAS 108-94-1)	Can be absorbed through the skin.
· · · · · · · · · · ·	

Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection	Face shield is recommended. Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

, ,	•
Appearance	Translucent.
Physical state	Liquid.
Form	Liquid.
Color	Clear.
Odor	Solvent.
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	151 °F (66.11 °C)
Flash point	14.0 - 23.0 °F (-10.05.0 °C)
Evaporation rate	5.5 - 8
Flammability (solid, gas)	Not available.
Upper/lower flammability or expl	losive limits
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	145 mm Hg @ 20 C
Vapor density	2.5
Relative density	0.82 - 0.86
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	< 100 cP
Other information	
Bulk density	7 lb/gal
VOC (Weight %)	505 g/l SQACMD Method 304
10. Stability and reactivity	
Reactivity	The product is stable and non-reactive under normal conditions of use, storage and

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
Hazardous decomposition products	No hazardous decomposition products are known.



SAFETY DATA SHEET



1. Identification

Product identifier	Oatey Clear Primer - NSF Listed for CPVC and PVC	
Other means of identification		
SDS number	1402E	
Synonyms	Part Numbers: 30749, 30750, 30751, 30752, 30753, 30754, 31652, 31653	
Recommended use	Joining PVC Pipes	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		

Company Name	Oatey Co.
Address	4700 West 160th St.
	Cleveland, OH 44135
Telephone	216-267-7100
E-mail	info@oatey.com
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)
Emergency First Aid	1-877-740-5015
Contact person	MSDS Coordinator

2. Hazard(s) identification

Physical hazards	Flammable liquids Category 2	
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
OSHA defined hazards	Not classified.	

OSHA defined hazards

Label elements



	v v v
Signal word	Danger
Hazard statement	Highly flammable liquid and vapor. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.
Precautionary statement	
Prevention	Keep away from heat/sparks/open flames/hot surfaces No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.
Storage	Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Information on toxicological effects

Acute toxicity

May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.

Components	Species	Test Results
Acetone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	20 ml/kg
Inhalation		
LC50	Rat	50 mg/l, 8 Hours
Oral		
LD50	Rat	5800 mg/kg
Cyclohexanone (CAS 108-94-1)		
Acute		
Dermal		
LD50	Rabbit	948 mg/kg
Inhalation		
LC50	Rat	8000 ppm, 4 hours
Oral		
LD50	Rat	1540 mg/kg
	be based on additional component data not showr	٦.
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Causes serious eye irritation.	
Respiratory or skin sensitizatio	n	
Respiratory sensitization	Not available.	
Skin sensitization	This product is not expected to cause skin sense	sitization.
Germ cell mutagenicity	No data available to indicate product or any commutagenic or genotoxic.	mponents present at greater than 0.1% are
Carcinogenicity	mice developed liver tumors while neither the for results. Because the carcinogenic mechanisms either tumor, the EPA determined that the male assessment of carcinogenic potential in human	3). Male rats developed renal tumors and female
IARC Monographs. Overall	Evaluation of Carcinogenicity	
Cyclohexanone (CAS 10 OSHA Specifically Regulate	8-94-1) 3 Not classifiab ad Substances (29 CFR 1910.1001-1050)	ble as to carcinogenicity to humans.
Not listed.	· · · · · · · · · · · · · · · · · · ·	

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.		
Specific target organ toxicity - single exposure	Narcotic effe	cts. May cause drowsiness and dizzine	ss. Respiratory tract irritation.
Specific target organ toxicity - repeated exposure	Not classified	J.	
Aspiration hazard	May be fatal	if swallowed and enters airways.	
Chronic effects	Prolonged inl	halation may be harmful.	
12. Ecological informatior	ı		
Ecotoxicity			ardous. However, this does not exclude the Irmful or damaging effect on the environment.
Components		Species	Test Results
Acetone (CAS 67-64-1)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales prome	elas) > 100 mg/l, 96 hours
Cyclohexanone (CAS 108-94	-1)		
Aquatic			
Fish	LC50	Fathead minnow (Pimephales prome	elas) 481 - 578 mg/l, 96 hours
* Estimates for product may b	e based on add	ditional component data not shown.	
Persistence and degradability		vailable on the degradability of this prod	luct.
Bioaccumulative potential	No data avail	lable.	
Partition coefficient n-octar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94 Furan, Tetrahydro- (CAS 109 Methyl ethyl ketone (CAS 78-	-1) -99-9)	Kow) -0.24 0.81 0.46 0.29	
Mobility in soil	No data avail	lable.	
Other adverse effects			depletion, photochemical ozone creation ntial) are expected from this component.
13. Disposal consideration	ns		
Disposal instructions	Collect and re and its contains sewers/water	iner must be disposed of as hazardous r supplies. Do not contaminate ponds, v	at licensed waste disposal site. This material waste. Do not allow this material to drain into waterways or ditches with chemical or used nce with local/regional/national/international
Local disposal regulations	Dispose in ac	Dispose in accordance with all applicable regulations.	
Hazardous waste code	disposal com	ipany.	etween the user, the producer and the waste
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).		
Contaminated packaging			vaste handling site for recycling or disposal. e, follow label warnings even after container is
14. Transport information			
DOT			
UN number	UN1993		
UN proper shipping name Transport hazard class(es)	Flammable li	quids, n.o.s. (Methyl ethyl ketone RQ =	25063 LBS, Acetone RQ = 12522 LBS)

UN proper shipping name Transport hazard class(es)	Flammable liquids, n.o.s. (Methyl ethyl ketone RQ = 25063 LBS, Acetone RQ = 12522 LBS)
Class	2
	5
Subsidiary risk	-
Label(s)	3
Packing group	
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB2, T7, TP1, TP8, TP28

	Packaging exceptions	150	
	Packaging non bulk	202	
	Packaging bulk	242	
ΙΑΤ			
	UN number	UN1993	
	UN proper shipping name	Flammable liquid, n.o.s. (Methyl	ethyl ketone. Acetone)
	Transport hazard class(es)		
	Class	3	
	Subsidiary risk	-	
	Packing group	П	
	Environmental hazards	No.	
	ERG Code	3H	
	Special precautions for user	Read safety instructions, SDS a	nd emergency procedures before handling.
IME	• •	•	
	UN number	UN1993	
	UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (N	Methyl ethyl ketone, Acetone)
	Transport hazard class(es)		
	Class	3	
	Subsidiary risk	-	
	Packing group	П	
	Environmental hazards		
	Marine pollutant	No.	
	EmS	F-E, S-E	
	Special precautions for user	Read safety instructions, SDS a	nd emergency procedures before handling.
Tra	nsport in bulk according to	Not available.	
An	nex II of MARPOL 73/78 and		
the	IBC Code		
15	Regulatory information		
	. Regulatory information		
	. Regulatory information federal regulations	This product is a "Hazardous Ch	nemical" as defined by the OSHA Hazard Communication
	•	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200.	
	federal regulations	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S.	EPA TSCA Inventory List.
	federal regulations TSCA Section 12(b) Export N	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200.	EPA TSCA Inventory List.
	federal regulations TSCA Section 12(b) Export N Not regulated.	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S. Iotification (40 CFR 707, Subpt.	EPA TSCA Inventory List. D)
	federal regulations TSCA Section 12(b) Export N Not regulated. OSHA Specifically Regulated	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S.	EPA TSCA Inventory List. D)
	federal regulations TSCA Section 12(b) Export N Not regulated. OSHA Specifically Regulated Not listed.	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S. Iotification (40 CFR 707, Subpt.	EPA TSCA Inventory List. D)
	federal regulations TSCA Section 12(b) Export N Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substar	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S. Iotification (40 CFR 707, Subpt. I Substances (29 CFR 1910.100 Ince List (40 CFR 302.4)	EPA TSCA Inventory List. D) 1-1050)
	federal regulations TSCA Section 12(b) Export N Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substar Acetone (CAS 67-64-1)	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S. Iotification (40 CFR 707, Subpt. I Substances (29 CFR 1910.100 Ince List (40 CFR 302.4)	EPA TSCA Inventory List. D) 1-1050) LISTED
	federal regulations TSCA Section 12(b) Export N Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S. Iotification (40 CFR 707, Subpt. I Substances (29 CFR 1910.100 Ince List (40 CFR 302.4)	EPA TSCA Inventory List. D) 1-1050) LISTED LISTED
	federal regulations TSCA Section 12(b) Export N Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108 Furan, Tetrahydro- (CAS 1	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S. Iotification (40 CFR 707, Subpt. I Substances (29 CFR 1910.100 Ince List (40 CFR 302.4)	EPA TSCA Inventory List. D) 1-1050) LISTED LISTED LISTED
US	federal regulations TSCA Section 12(b) Export N Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108 Furan, Tetrahydro- (CAS 1 Methyl ethyl ketone (CAS	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S. Iotification (40 CFR 707, Subpt. Substances (29 CFR 1910.100 nce List (40 CFR 302.4)	EPA TSCA Inventory List. D) 1-1050) LISTED LISTED LISTED LISTED
US	federal regulations TSCA Section 12(b) Export N Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108 Furan, Tetrahydro- (CAS 108 Furan, Tetrahydro- (CAS 108) Sperfund Amendments and Real	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S. Iotification (40 CFR 707, Subpt. I Substances (29 CFR 1910.100 nce List (40 CFR 302.4) -94-1) 109-99-9) 78-93-3) authorization Act of 1986 (SARA	EPA TSCA Inventory List. D) 1-1050) LISTED LISTED LISTED LISTED
US	federal regulations TSCA Section 12(b) Export N Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108 Furan, Tetrahydro- (CAS 1 Methyl ethyl ketone (CAS	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S. Iotification (40 CFR 707, Subpt. I Substances (29 CFR 1910.100 nce List (40 CFR 302.4) -94-1) I 109-99-9) I 78-93-3) I authorization Act of 1986 (SARA Immediate Hazard - Yes	EPA TSCA Inventory List. D) 1-1050) LISTED LISTED LISTED LISTED
US	federal regulations TSCA Section 12(b) Export N Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108 Furan, Tetrahydro- (CAS 108 Furan, Tetrahydro- (CAS 108) Sperfund Amendments and Real	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S. Iotification (40 CFR 707, Subpt. I Substances (29 CFR 1910.100 nce List (40 CFR 302.4) -94-1) 109-99-9) 78-93-3) authorization Act of 1986 (SARA	EPA TSCA Inventory List. D) 1-1050) LISTED LISTED LISTED LISTED
US	federal regulations TSCA Section 12(b) Export N Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108 Furan, Tetrahydro- (CAS 108 Furan, Tetrahydro- (CAS 108) Sperfund Amendments and Real	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S. Iotification (40 CFR 707, Subpt. I Substances (29 CFR 1910.100 nce List (40 CFR 302.4) -94-1) 109-99-9) 178-93-3) authorization Act of 1986 (SARA Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No	EPA TSCA Inventory List. D) 1-1050) LISTED LISTED LISTED LISTED
US	federal regulations TSCA Section 12(b) Export N Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108 Furan, Tetrahydro- (CAS 108 Furan, Tetrahydro- (CAS 108 Furan, Tetrahydro- (CAS 108) Furan, Furan,	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S. Iotification (40 CFR 707, Subpt. I Substances (29 CFR 1910.100 Ince List (40 CFR 302.4) Ince List (40 CFR 30.4) Ince List (40 CFR 30.4) Ince List (40 CFR 30.4) Ince List (40 CFR 30.4) Ince List (40 CFR 30.	EPA TSCA Inventory List. D) 1-1050) LISTED LISTED LISTED LISTED
US	federal regulations TSCA Section 12(b) Export N Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108 Furan, Tetrahydro- (CAS 108 Furan, Tetrahydro- (CAS 108) Sperfund Amendments and Real	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S. Iotification (40 CFR 707, Subpt. I Substances (29 CFR 1910.100 Ince List (40 CFR 302.4) Ince List (40 CFR 30.4) Ince List (40 CFR 30.4) Ince List (40 CFR 30.4) Ince List (40 CFR 30.4) Ince List (40 CFR 30.	EPA TSCA Inventory List. D) 1-1050) LISTED LISTED LISTED LISTED
US	federal regulations TSCA Section 12(b) Export N Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108 Furan, Tetrahydro- (CAS 108 Furan, Tetrahydro- (CAS 108 Furan, Tetrahydro- (CAS 108) Furan, Furan,	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S. Iotification (40 CFR 707, Subpt. I Substances (29 CFR 1910.100 Ince List (40 CFR 302.4) Ince List (40 CFR 30.4) Ince List (40 CFR 30.4) Ince List (40 CFR 30.4) Ince List (40 CFR 30.4) Ince List (40 CFR 30.	EPA TSCA Inventory List. D) 1-1050) LISTED LISTED LISTED LISTED
US	federal regulations TSCA Section 12(b) Export N Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108 Furan, Tetrahydro- (CAS 108 Furan, Tetrahydro- (CAS 108) Furan, Tetrahydro- (CAS 108) SARA 302 Extremely hazardo	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S. Iotification (40 CFR 707, Subpt. I Substances (29 CFR 1910.100 Ince List (40 CFR 302.4) Ince List (40 CFR 30.4) Ince List (40 CFR 30.4) Ince List (40 CFR 30.4) Ince List (40 CFR 30.4) Ince List (40 CFR 30.	EPA TSCA Inventory List. D) 1-1050) LISTED LISTED LISTED LISTED
US	federal regulations TSCA Section 12(b) Export N Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108 Furan, Tetrahydro- (CAS 108 Furan, Tetrahydro- (CAS 108) Furan, Tetrahydro- (CAS 108) Sara 302 Extremely hazarda Not listed.	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S. Iotification (40 CFR 707, Subpt. I Substances (29 CFR 1910.100 nce List (40 CFR 302.4) -94-1) 109-99-9) 178-93-3) Authorization Act of 1986 (SARA Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Reactivity Hazard - No Dus substance	EPA TSCA Inventory List. D) 1-1050) LISTED LISTED LISTED LISTED
US	federal regulations TSCA Section 12(b) Export N Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108 Furan, Tetrahydro- (CAS 108 Furan, Tetrahydro- (CAS 108 Furan, Tetrahydro- (CAS 108) Furan,	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S. Iotification (40 CFR 707, Subpt. I Substances (29 CFR 1910.100 nce List (40 CFR 302.4) -94-1) 109-99-9) 178-93-3) Authorization Act of 1986 (SARA Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Reactivity Hazard - No Dus substance	EPA TSCA Inventory List. D) 1-1050) LISTED LISTED LISTED LISTED
US	federal regulations TSCA Section 12(b) Export N Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108 Furan, Tetrahydro- (CAS 108 Furan, Tetrahydro- (CAS 108 Furan, Tetrahydro- (CAS 108) Furan,	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S. Iotification (40 CFR 707, Subpt. I Substances (29 CFR 1910.100 nce List (40 CFR 302.4) -94-1) 109-99-9) 178-93-3) Authorization Act of 1986 (SARA Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Reactivity Hazard - No Dus substance	EPA TSCA Inventory List. D) 1-1050) LISTED LISTED LISTED LISTED
US	federal regulations TSCA Section 12(b) Export N Not regulated. OSHA Specifically Regulated Not listed. CERCLA Hazardous Substar Acetone (CAS 67-64-1) Cyclohexanone (CAS 108 Furan, Tetrahydro- (CAS 108 Furan, Tetrahydro- (CAS 108 Furan, Tetrahydro- (CAS 108) Furan,	This product is a "Hazardous Ch Standard, 29 CFR 1910.1200. All components are on the U.S. Iotification (40 CFR 707, Subpt. I Substances (29 CFR 1910.100 nce List (40 CFR 302.4) -94-1) 109-99-9) 178-93-3) Authorization Act of 1986 (SARA Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Reactivity Hazard - No Dus substance	EPA TSCA Inventory List. D) 1-1050) LISTED LISTED LISTED LISTED

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Safe Drinking Water Act	Not regulated.		
(SDWA)			
Drug Enforcement Ad Chemical Code Numb		ssential Chemicals (21 CFR 1310.02(b)	and 1310.04(f)(2) and
Acetone (CAS 67-		6532	
Methyl ethyl keton		6714 2 Exempt Chemical Mixtures (21 CFR 1	210 12(0))
Acetone (CAS 67-		35 %WV	510.12(0))
Methyl ethyl keton		35 %WV	
DEA Exempt Chemica	al Mixtures Code Number		
Acetone (CAS 67-		6532	
Methyl ethyl keton	e (CAS 78-93-3)	6714	
state regulations			
US. Massachusetts RTK -			
Acetone (CAS 67-64-1) Cyclohexanone (CAS 1			
Furan, Tetrahydro- (CAS	,		
Methyl ethyl ketone (CA			
US. New Jersey Worker a	nd Community Right-to-Know	w Act	
Acetone (CAS 67-64-1)			
Cyclohexanone (CAS 1			
Furan, Tetrahydro- (CA Methyl ethyl ketone (CA			
	and Community Right-to-Kn	ow Law	
Acetone (CAS 67-64-1)			
Cyclohexanone (CAS 1	08-94-1)		
Furan, Tetrahydro- (CA			
Methyl ethyl ketone (C/ US. Rhode Island RTK	45 78-93-3)		
Acetone (CAS 67-64-1)			
Cyclohexanone (CAS 1			
Furan, Tetrahydro- (CA			
Methyl ethyl ketone (CA	AS 78-93-3)		
US. California Proposition	65		
	g Water and Toxic Enforcemen / listed as carcinogens or repro	t Act of 1986 (Proposition 65): This mater oductive toxins.	ial is not known to contain
rnational Inventories			
Country(s) or region	Inventory name		On inventory (yes/no
Australia	Australian Inventory of Ch	emical Substances (AICS)	Ye
Canada	Domestic Substances List	(DSL)	Ye
Canada	Non-Domestic Substances	s List (NDSL)	Ν
China	Inventory of Existing Chen	nical Substances in China (IECSC)	Ye
Europe	European Inventory of Exis Substances (EINECS)	sting Commercial Chemical	Ye
Europe	European List of Notified C	Chemical Substances (ELINCS)	Ν
Japan	Inventory of Existing and N	New Chemical Substances (ENCS)	Ye
Korea	Existing Chemicals List (E	CL)	Ye
New Zealand	New Zealand Inventory		Ye
Philippines	Philippine Inventory of Che	emicals and Chemical Substances	Ye
	(PICCS)		

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	14-August-2014
Revision date	17-December-2014
Version #	02
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.



SAFETY DATA SHEET

1. Identification

Product identifier	Oatey Purple Primer Cleaner		
Other means of identification			
Product code	1401E		
Synonyms	Part Numbers: 30780, 30783, 30796, 30768, 30806, 30769		
Recommended use	Joining PVC Pipes		
Recommended restrictions	None known.		
Manufacturer/Importer/Supplier	/Distributor information		
Company Name	Oatey Co.		
Address	4700 West 160th St.		
	Cleveland, OH 44135		
Telephone	216-267-7100		
E-mail	info@oatey.com		
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)		
Emergency First Aid	1-877-740-5015		
Contact person	MSDS Coordinator		

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 2	
Health hazards	Serious eye damage/eye irritation	Category 2A	
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation	
	Specific target organ toxicity, single exposure	Category 3 narcotic effects	
	Aspiration hazard	Category 1	
OSHA defined hazards	Not classified.		

OSHA defined hazards

Label elements



	· · · ·
Signal word	Danger
Hazard statement	Highly flammable liquid and vapor. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.
Precautionary statement	
Prevention	Keep away from heat/sparks/open flames/hot surfaces No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear eye protection/face protection. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.
Storage	Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.

Supplemental information

Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Acetone	67-64-1	70-100
Cyclohexanone	108-94-1	1-5

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures	
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. Aspiration may cause pulmonary edema and pneumonitis. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.
5. Fire-fighting measures	
Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
Specific methods General fire hazards	Use standard firefighting procedures and consider the hazards of other involved materials. Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.			
	Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.			
	Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.			
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.			
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.			
7. Handling and storage				
Precautions for safe handling	Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.			
Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).			

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components		Туре		,	/alue	
Acetone (CAS 67-64-1)		PEL		:	2400 mg/m3	
					1000 ppm	
Cyclohexanone (CAS 108-94-1)		PEL		:	200 mg/m3	
				:	50 ppm	
US. ACGIH Threshold Li	mit Values					
Components		Туре		,	/alue	
Acetone (CAS 67-64-1)		STEL			750 ppm	
		TWA		1	500 ppm	
Cyclohexanone (CAS 108-94-1)		STEL		:	50 ppm	
,		TWA		:	20 ppm	
US. NIOSH: Pocket Guid	e to Chemical Haz	ards				
Components		Туре		,	/alue	
Acetone (CAS 67-64-1)		TWA			590 mg/m3	
				:	250 ppm	
Cyclohexanone (CAS 108-94-1)		TWA			100 mg/m3	
				-	25 ppm	
ogical limit values						
ACGIH Biological Expos	ure Indices					
Components	Value	Deter	minant	Specimen	Sampling Time	
Acetone (CAS 67-64-1)	50 mg/l	Aceto	ne	Urine	*	

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time	
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexan ediol, with hydrolysis	Urine	*	
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*	
* - For sampling details, plea	se see the source docu	ment.			
Exposure guidelines					
US - California OELs: Skin	designation				
Cyclohexanone (CAS 1 US - Minnesota Haz Subs:			absorbed throu	ugh the skin.	
Cyclohexanone (CAS 1 US - Tennessee OELs: Ski	,	Skin des	signation applie	9S.	
Cyclohexanone (CAS 1 US ACGIH Threshold Limit	08-94-1)		absorbed throu	ugh the skin.	
Cyclohexanone (CAS 1 US. NIOSH: Pocket Guide	Can be absorbed through the skin.				
Cyclohexanone (CAS 1	,		absorbed throu	•	
controls changes per applicable, u maintain airt established,		of general and local exhaust ventilation. Good general ventilation (typically 10 air our) should be used. Ventilation rates should be matched to conditions. If e process enclosures, local exhaust ventilation, or other engineering controls to rne levels below recommended exposure limits. If exposure limits have not been naintain airborne levels to an acceptable level. Eye wash facilities and emergency be available when handling this product.			
Individual protection measures	s, such as personal pro	otective equipmen	t		
Eye/face protection	Chemical respirator	with organic vapor of	cartridge and fu	Ill facepiece.	
Skin protection					
Hand protection	Wear appropriate ch supplier.	emical resistant glo	ves. Suitable g	loves can be recommended by the glove	
Other	Wear appropriate ch	emical resistant clo	thing.		
Respiratory protection	Chemical respirator	with organic vapor of	cartridge and fu	ull facepiece.	
Thermal hazards	Wear appropriate the	ermal protective clo	thing, when ne	cessary.	
General hygiene considerations		ndling the material a	and before eating	ve good personal hygiene measures, such ng, drinking, and/or smoking. Routinely /e contaminants.	

9. Physical and chemical properties

Appearance				
Physical state	Liquid.			
Form	Translucent liquid.			
Color	Purple			
Odor	Solvent.			
Odor threshold	Not available.			
рН	Not available.			
Melting point/freezing point	Not available.			
Initial boiling point and boiling range	133 °F (56.11 °C)			
Flash point	-4.0 °F (-20.0 °C)			
Evaporation rate	Not available.			
Flammability (solid, gas)	Not applicable.			
Upper/lower flammability or explosive limits				
Flammability limit - lower (%)	Not available.			

Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	145 mm Hg @ 20 C
Vapor density	2.5
Relative density	0.79 +/- 0.02
Solubility(ies)	
Solubility (water)	Miscible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	< 10 cP
Other information	
Bulk density	7 lb/gal
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
VOC (Weight %)	180 g/I SQACMD Method 24
40 Stability and reactivity	

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. May cause redness and pain.

Information on toxicological effects

Acute toxicity

May	be fatal if swallowed and en	ters airways. Narcoti	c effects. May cause	respiratory irritation.

Components	Species	Test Results
Acetone (CAS 67-64-1)		
Acute		
Dermal LD50	Rabbit	20 ml/kg
Inhalation LC50	Rat	50 mg/l, 8 Hours

Components	Species		Test Results
Oral	Det		5000
LD50	Kat	Rat 5800 mg/kg	
Cyclohexanone (CAS 108-94-1)			
Acute			
Dermal	Rabbit		049 ma/ka
LD50	Rabbit		948 mg/kg
Inhalation	Det		2000 ppm 4 bours
LC50	Rat		8000 ppm, 4 hours
Oral	Det		4540
LD50	Rat		1540 mg/kg
* Estimates for product may I	be based on addition	al component data not shown.	
Skin corrosion/irritation	Causes skin irrita	ion.	
Serious eye damage/eye rritation	Causes serious e	e irritation.	
Respiratory or skin sensitizatio	on		
Respiratory sensitization	Not a respiratory	ensitizer.	
Skin sensitization	This product is n	expected to cause skin sensitization	lion.
Germ cell mutagenicity	No data available mutagenic or ger		ents present at greater than 0.1% are
Carcinogenicity	This product is n	considered to be a carcinogen by	/ IARC, ACGIH, NTP, or OSHA.
IARC Monographs. Overall	Evaluation of Card	nogenicity	
Cyclohexanone (CAS 10 OSHA Specifically Regulate Not listed.	,		to carcinogenicity to humans.
Reproductive toxicity	This product is n	expected to cause reproductive of	or developmental effects.
Specific target organ toxicity - single exposure	Narcotic effects. May cause drowsiness and dizziness. Respiratory tract irritation.		
Specific target organ toxicity - repeated exposure	Not classified.		
Aspiration hazard	May be fatal if sv	May be fatal if swallowed and enters airways.	
Chronic effects	Prolonged inhala	on may be harmful.	
10 Feelewieelinfermetie	-		
12. Ecological information			
Ecotoxicity			ardous. However, this does not exclude the rmful or damaging effect on the environment
Components		ecies	Test Results
Acetone (CAS 67-64-1)	3	50153	וכסו ווכסטונס
Aceione (CAS 67-64-1)			
Fish	LC50 F	thead minnow (Pimephales prome	$a_{a} > 100 \text{ mg/l} 96 \text{ hours}$
-			
Cyclohexanone (CAS 108-94	+- 1)		
Aquatic Fish	LC50 F	thead minnow (Pimephales prome	128 / 181 - 578 mg/ 96 hours
1 1011	L030 F	areau mininow (Fimephales plome	101 - 570 mg/l, 30 mouls
* Estimates for product may I	be based on addition	al component data not shown.	
Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential	No data available.		
Partition coefficient n-octal Acetone (CAS 67-64-1)) -0.24	
	4-1)	0.81	
Cyclohexanone (CAS 108-94	,		
	No data available		

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT	
UN number	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (Acetone RQ = 5128 LBS)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	II
	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB2, T7, TP1, TP8, TP28
Packaging exceptions	150
Packaging non bulk	202
Packaging bulk	242
ΙΑΤΑ	
UN number	UN1993
UN proper shipping name	Flammable liquid, n.o.s. (Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	11
Environmental hazards	No.
ERG Code	3H
	Read safety instructions, SDS and emergency procedures before handling.
IMDG	
UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	11
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-E
	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to	Not established.
Annex II of MARPOL 73/78 and	
the IBC Code	

15. Regulatory information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication
	Standard, 29 CFR 1910.1200.
	All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export	Notification (40 CFR 707, Sub	opt. D)	
Not regulated.	•		
	ed Substances (29 CFR 1910.	1001-1050)	
Not listed. CERCLA Hazardous Substa	ance List $(A0 \text{ CER } 302 A)$		
Acetone (CAS 67-64-1)		LISTED	
Cyclohexanone (CAS 10)8-94-1)	LISTED	
Superfund Amendments and Re	eauthorization Act of 1986 (SA	ARA)	
Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No		
SARA 302 Extremely hazar Not listed.	dous substance		
SARA 311/312 Hazardous chemical	No		
SARA 313 (TRI reporting) Not regulated.			
Other federal regulations			
Clean Air Act (CAA) Section	n 112 Hazardous Air Pollutant	s (HAPs) List	
	n 112(r) Accidental Release P	revention (40 CFR 68.130)	
Not regulated. Safe Drinking Water Act	Not regulated.		
(SDWA)	ninistration (DEA) List 2 Ess	ential Chemicals (21 CFR 1310.02(b) and	1310 04(f)(2) and
Chemical Code Numbe	r		1310.04(1)(2) and
Acetone (CAS 67-64 Drug Enforcement Adn	,	6532 Exempt Chemical Mixtures (21 CFR 1310	.12(c))
Acetone (CAS 67-64		35 %WV	
Acetone (CAS 67-64		6532	
US state regulations	,		
US. Massachusetts RTK - S	Substance List		
Acetone (CAS 67-64-1) Cyclohexanone (CAS 10)8-94-1)		
•	d Community Right-to-Know	Act	
Acetone (CAS 67-64-1) Cyclohexanone (CAS 10)8-94-1)		
•	and Community Right-to-Knov	v Law	
Acetone (CAS 67-64-1)			
Cyclohexanone (CAS 10 US. Rhode Island RTK	98-94-1)		
Acetone (CAS 67-64-1) Cyclohexanone (CAS 10)8-94-1)		
		Act of 1986 (Proposition 65): This material is active toxins.	s not known to contain
International Inventories			
Country(s) or region	Inventory name		On inventory (yes/no)*
Australia	Australian Inventory of Chem		Yes
Canada	Domestic Substances List (D		Yes
Canada	Non-Domestic Substances L		No
China	Inventory of Existing Chemic	al Substances in China (IECSC)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	27-May-2015
Revision date	-
Version #	01
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.





SAFETY DATA SHEET

1. Identification

1. Identification			
Product identifier	Rain-R Shine Blue PVC Cement		
Other means of identification			
Product code	1104E		
Synonyms	Part Numbers: 30890, 30891, 30893, 30894,	30895, 30896, 31954, 31955, 31956, 31957	
Recommended use	Joining PVC Pipes		
Recommended restrictions	None known.		
Manufacturer/Importer/Supplier	/Distributor information		
Company Name	Oatey Co.		
Address	4700 West 160th St.		
	Cleveland, OH 44135		
Telephone	216-267-7100		
E-mail	info@oatey.com		
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)		
Emergency First Aid	1-877-740-5015		
Contact person	MSDS Coordinator		
2. Hazard(s) identification			
Physical hazards	Flammable liquids	Category 2	
Health hazards	Acute toxicity, oral	Category 4	
	Skin corrosion/irritation	Category 2	
	Serious eye damage/eye irritation	Category 2A	

	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
OSHA defined hazards	Not classified.	
Label elements		
	$\wedge \wedge \wedge$	
	$\langle \langle \rangle \times \langle \rangle \times \langle \rangle \rangle$	
Signal word	Danger	
Hazard statement	Highly flammable liquid and vapor. Harmful if s	swallowed. May be fatal if swallowed and enters

	airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.
Precautionary statement	
Prevention	Keep away from heat/sparks/open flames/hot surfaces No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

Storage

Disposal

Hazard(s) not otherwise classified (HNOC)

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

Supplemental information

Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Furan, Tetrahydro-	109-99-9	40-70
Polyvinyl chloride	9002-86-2	10-20
Acetone	67-64-1	5-15
Cyclohexanone	108-94-1	5-15
Methyl ethyl ketone	78-93-3	5-15
Silica, amorphous, fumed	112945-52-5	1-5

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.
5. Fire-fighting measures	
Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

6. Accidental release measures

V. Accidental release meas	
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.
	Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.
	Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage	
Precautions for safe handling	Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Туре	Value	
Polyvinyl chloride (CAS 9002-86-2)	STEL	5 ppm	
5002 00 2)	TWA	1 ppm	

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	Form
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
		1000 ppm	
Cyclohexanone (CAS 108-94-1)	PEL	200 mg/m3	
,		50 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	PEL	590 mg/m3	
,		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	PEL	590 mg/m3	
,		200 ppm	
Polyvinyl chloride (CAS 9002-86-2)	PEL	5 mg/m3	Respirable fraction.
,		15 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Туре	Value	
Silica, amorphous, fumed (CAS 112945-52-5)	TWA	0.8 mg/m3	
		20 mppcf	
US. ACGIH Threshold Limit Value	S		
Components	Туре	Value	Form
Acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
Cyclohexanone (CAS 108-94-1)	STEL	50 ppm	
,	TWA	20 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	100 ppm	
,	TWA	50 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	300 ppm	
·	TWA	200 ppm	
Polyvinyl chloride (CAS 9002-86-2)	TWA	1 mg/m3	Respirable fraction.
US. NIOSH: Pocket Guide to Chen	nical Hazards		
Components	Туре	Value	
Acetone (CAS 67-64-1)	TWA	590 mg/m3	
		250 ppm	
Cyclohexanone (CAS 108-94-1)	TWA	100 mg/m3	
		25 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	735 mg/m3	
		250 ppm	
	TWA	590 mg/m3	
		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	885 mg/m3	
		300 ppm	
	TWA	590 mg/m3	
		200 ppm	
Silica, amorphous, fumed (CAS 112945-52-5)	TWA	6 mg/m3	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexan ediol, with hydrolysis	Urine	*
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*
Furan, Tetrahydro- (CAS 109-99-9)	2 mg/l	Tetrahydrofura n	Urine	*
Methyl ethyl ketone (CAS 78-93-3)	2 mg/l	MEK	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

Exposure guidelines			
US - California OELs: Skin d	esignation		
Cyclohexanone (CAS 108	-94-1)	Can be absorbed through the skin.	
US - Minnesota Haz Subs: S	kin designation applies		
Cyclohexanone (CAS 108	,	Skin designation applies.	
US - Tennessee OELs: Skin	designation		
Cyclohexanone (CAS 108		Can be absorbed through the skin.	
US ACGIH Threshold Limit V	•		
Cyclohexanone (CAS 108		Can be absorbed through the skin.	
Furan, Tetrahydro- (CAS	,	Can be absorbed through the skin.	
US. NIOSH: Pocket Guide to			
Cyclohexanone (CAS 108	,	Can be absorbed through the skin.	
Appropriate engineering controls	Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.		
Individual protection measures,	al protection measures, such as personal protective equipment		
Eye/face protection	Face shield is recommended. Wear safety glasses with side shields (or goggles).		
Skin protection			
Hand protection	Wear appropriate chemical resistant gloves.		
Other	Wear appropriate chemical resistant clothing.		
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.		
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.		
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.		

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Translucent liquid.
Color	Clear.
Odor	Solvent.
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	151 °F (66.11 °C)
Flash point	14.0 - 23.0 °F (-10.05.0 °C)
Evaporation rate	5.5 - 8
Flammability (solid, gas)	Not available.
Upper/lower flammability or expl	losive limits
Flammability limit - lower (%)	1.8
Flammability limit - upper (%)	11.8
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	145 mm Hg @ 20 C
Vapor density	2.5
Relative density	0.92 +/- 0.02

Solubility(ies)	
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	1200 - 2500 cP
Viscosity temperature	77 °F (25 °C)
Other information	
Bulk density	7.7 lb/gal
VOC (Weight %)	443 g/l SQACMD 1168/M316A

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Information on toxicological effects

Acute toxicity

May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.

Components	Species	Test Results
Acetone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	20 ml/kg
Inhalation		
LC50	Rat	50 mg/l, 8 Hours
Oral		
LD50	Rat	5800 mg/kg
Cyclohexanone (CAS 108-9	94-1)	
Acute		
Dermal		
LD50	Rabbit	948 mg/kg
Inhalation		
LC50	Rat	8000 ppm, 4 hours

Components	Species	Test Results	
Oral			
LD50	Rat	1540 mg/kg	
* Estimates for product may b	be based on add	itional component data not shown.	
Skin corrosion/irritation	Causes skin i	Causes skin irritation.	
Serious eye damage/eye irritation	Causes serious eye irritation.		
Respiratory or skin sensitizatio	n		
Respiratory sensitization	Not available.	Not available.	
Skin sensitization	This product i	s not expected to cause skin sensitization.	
Germ cell mutagenicity		No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.		
IARC Monographs. Overall	Evaluation of C	arcinogenicity	
Cyclohexanone (CAS 10 Polyvinyl chloride (CAS 1 Silica, amorphous, fume OSHA Specifically Regulate	98-94-1) 9002-86-2) d (CAS 112945∹	 3 Not classifiable as to carcinogenicity to humans. 3 Not classifiable as to carcinogenicity to humans. 52-5) 3 Not classifiable as to carcinogenicity to humans. 	
Polyvinyl chloride (CAS	9002-86-2)	Cancer	
Reproductive toxicity	This product i	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Narcotic effect	Narcotic effects. May cause drowsiness and dizziness. Respiratory tract irritation.	
Specific target organ toxicity - repeated exposure	Not classified	Not classified.	
Aspiration hazard	May be fatal i	May be fatal if swallowed and enters airways.	
Chronic effects	Prolonged inhalation may be harmful.		
12. Ecological information	n		
Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.		
Components		Species Test Results	
Acetone (CAS 67-64-1)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas) > 100 mg/l, 96 hours	
Cyclohexanone (CAS 108-94 Aquatic	-1)		
Fish	LC50	Fathead minnow (Pimephales promelas) 481 - 578 mg/l, 96 hours	
* Estimates for product move	hased on add	itional component data not shown.	
Persistence and degradability		ailable on the degradability of this product.	
Bioaccumulative potential	No data availa		
Partition coefficient n-octa		Kow)	
Acetone (CAS 67-64-1)	1)	-0.24	
Cyclohexanone (CAS 108-94 Furan, Tetrahydro- (CAS 109		0.81 0.46	
Methyl ethyl ketone (CAS 78-		0.29	
Mobility in soil	No data availa		
Other adverse effects		erse environmental effects (e.g. ozone depletion, photochemical ozone creat ocrine disruption, global warming potential) are expected from this compone	
	r		00011

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT	
UN number	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (Methyl ethyl ketone RQ = 34014 LBS, Acetone RQ = 34247 LBS)
Transport hazard class(es)	
Class	3
Subsidiary risk	
Label(s)	3
Packing group	II.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB2, T7, TP1, TP8, TP28
Packaging exceptions	150
Packaging non bulk	202
Packaging bulk	242
ΙΑΤΑ	
UN number	UN1993
UN proper shipping name	Flammable liquid, n.o.s. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	
Packing group	
Environmental hazards	No.
ERG Code	3H Read activity instructions, CDC and emergency aready use before bondling
	Read safety instructions, SDS and emergency procedures before handling.
IMDG	
UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk Packing group	-
Environmental hazards	1
	No.
Marine pollutant EmS	F-E, S-E
	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to	Not available.
Annex II of MARPOL 73/78 and the IBC Code	
15. Regulatory information	

15. Regulatory information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication
	Standard, 29 CFR 1910.1200.
	All components are on the U.S. EPA TSCA Inventory List.

Polyvinyl chloride (CAS S	ed Substances (29 CFR 191).1001-1050)	
	9002-86-2)	Cancer Central nervous system Liver Blood Flammability	
CERCLA Hazardous Substa	ance List (40 CFR 302.4)	Farmasing	
Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS	i 109-99-9)	LISTED LISTED LISTED LISTED	
Superfund Amendments and Re Hazard categories	eauthorization Act of 1986 (Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No	SARA)	
SARA 302 Extremely hazard Not listed.	dous substance		
SARA 311/312 Hazardous chemical	No		
SARA 313 (TRI reporting) Not regulated.			
Other federal regulations			
Clean Air Act (CAA) Section	n 112 Hazardous Air Polluta	nts (HAPs) List	
Not regulated. Clean Air Act (CAA) Sectior	n 112(r) Accidental Release	Prevention (40 CFR 68.130)	
Not regulated.			
Safe Drinking Water Act (SDWA)	Not regulated.		
Drug Enforcement Adm		sential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and	l
Chemical Code Numbe			
Acetone (CAS 67-64		6532	
Acetone (CAS 67-64 Methyl ethyl ketone	(CAS 78-93-3)	6714	
Acetone (CAS 67-64 Methyl ethyl ketone Drug Enforcement Adm	(CÁS 78-93-3) hinistration (DEA). List 1 & 2	6714 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))	
Acetone (CAS 67-64 Methyl ethyl ketone Drug Enforcement Adm Acetone (CAS 67-64 Methyl ethyl ketone	(CÁS 78-93-3) hinistration (DEA). List 1 & 2 4-1)	6714	
Acetone (CAS 67-64 Methyl ethyl ketone Drug Enforcement Adm Acetone (CAS 67-64 Methyl ethyl ketone DEA Exempt Chemical Acetone (CAS 67-64	(CAS 78-93-3) hinistration (DEA). List 1 & 2 (-1) (CAS 78-93-3) Mixtures Code Number (-1)	6714 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) 35 %WV 35 %WV 6532	
Acetone (CAS 67-64 Methyl ethyl ketone Drug Enforcement Adm Acetone (CAS 67-64 Methyl ethyl ketone DEA Exempt Chemical Acetone (CAS 67-64 Methyl ethyl ketone	(CAS 78-93-3) hinistration (DEA). List 1 & 2 (-1) (CAS 78-93-3) Mixtures Code Number (-1)	6714 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) 35 %WV 35 %WV	
Acetone (CAS 67-64 Methyl ethyl ketone Drug Enforcement Adm Acetone (CAS 67-64 Methyl ethyl ketone DEA Exempt Chemical Acetone (CAS 67-64 Methyl ethyl ketone JS state regulations	(CAS 78-93-3) hinistration (DEA). List 1 & 2 4-1) (CAS 78-93-3) Mixtures Code Number 4-1) (CAS 78-93-3)	6714 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) 35 %WV 35 %WV 6532	
Acetone (CAS 67-64 Methyl ethyl ketone Drug Enforcement Adm Acetone (CAS 67-64 Methyl ethyl ketone DEA Exempt Chemical Acetone (CAS 67-64 Methyl ethyl ketone JS state regulations US. Massachusetts RTK - S	(CAS 78-93-3) hinistration (DEA). List 1 & 2 4-1) (CAS 78-93-3) Mixtures Code Number 4-1) (CAS 78-93-3)	6714 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) 35 %WV 35 %WV 6532	
Acetone (CAS 67-64 Methyl ethyl ketone Drug Enforcement Adm Acetone (CAS 67-64 Methyl ethyl ketone DEA Exempt Chemical Acetone (CAS 67-64 Methyl ethyl ketone JS state regulations	(CAS 78-93-3) ninistration (DEA). List 1 & 2 4-1) (CAS 78-93-3) Mixtures Code Number 4-1) (CAS 78-93-3) Substance List	6714 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) 35 %WV 35 %WV 6532	
Acetone (CAS 67-64 Methyl ethyl ketone Drug Enforcement Adm Acetone (CAS 67-64 Methyl ethyl ketone DEA Exempt Chemical Acetone (CAS 67-64 Methyl ethyl ketone JS state regulations US. Massachusetts RTK - S Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS	(CAS 78-93-3) hinistration (DEA). List 1 & 2 4-1) (CAS 78-93-3) Mixtures Code Number 4-1) (CAS 78-93-3) Substance List 8-94-1) 5 109-99-9)	6714 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) 35 %WV 35 %WV 6532	
Acetone (CAS 67-64 Methyl ethyl ketone Drug Enforcement Adm Acetone (CAS 67-64 Methyl ethyl ketone DEA Exempt Chemical Acetone (CAS 67-64 Methyl ethyl ketone JS state regulations US. Massachusetts RTK - S Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS	(CAS 78-93-3) hinistration (DEA). List 1 & 2 (CAS 78-93-3) Mixtures Code Number 4-1) (CAS 78-93-3) Substance List 8-94-1) 5 109-99-9) 5 78-93-3)	6714 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) 35 %WV 35 %WV 6532	
Acetone (CAS 67-64 Methyl ethyl ketone Drug Enforcement Adm Acetone (CAS 67-64 Methyl ethyl ketone DEA Exempt Chemical Acetone (CAS 67-64 Methyl ethyl ketone JS state regulations US. Massachusetts RTK - S Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS Silica, amorphous, fumed	(CAS 78-93-3) ninistration (DEA). List 1 & 2 4-1) (CAS 78-93-3) Mixtures Code Number 4-1) (CAS 78-93-3) Substance List 8-94-1) 5 109-99-9) 5 78-93-3) d (CAS 112945-52-5)	6714 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) 35 %WV 35 %WV 6532 6714	
Acetone (CAS 67-64 Methyl ethyl ketone Drug Enforcement Adm Acetone (CAS 67-64 Methyl ethyl ketone DEA Exempt Chemical Acetone (CAS 67-64 Methyl ethyl ketone JS state regulations US. Massachusetts RTK - S Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS Silica, amorphous, fumed US. New Jersey Worker and Acetone (CAS 67-64-1)	(CAS 78-93-3) hinistration (DEA). List 1 & 2 (CAS 78-93-3) Mixtures Code Number 4-1) (CAS 78-93-3) (CAS 78-93-3) (CAS 78-93-3) 5 78-93-3) d (CAS 112945-52-5) d Community Right-to-Know	6714 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) 35 %WV 35 %WV 6532 6714	
Acetone (CAS 67-64 Methyl ethyl ketone Drug Enforcement Adm Acetone (CAS 67-64 Methyl ethyl ketone DEA Exempt Chemical Acetone (CAS 67-64 Methyl ethyl ketone IS state regulations US. Massachusetts RTK - S Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS Silica, amorphous, fumed US. New Jersey Worker and Acetone (CAS 67-64-1) Cyclohexanone (CAS 10	(CAS 78-93-3) hinistration (DEA). List 1 & 2 (CAS 78-93-3) Mixtures Code Number 4-1) (CAS 78-93-3) (CAS 78-93-3) (CAS 78-93-3) 5 78-93-3) d (CAS 112945-52-5) d Community Right-to-Knov 8-94-1)	6714 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) 35 %WV 35 %WV 6532 6714	
Acetone (CAS 67-64 Methyl ethyl ketone Drug Enforcement Adm Acetone (CAS 67-64 Methyl ethyl ketone DEA Exempt Chemical Acetone (CAS 67-64 Methyl ethyl ketone US state regulations US. Massachusetts RTK - S Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Silica, amorphous, fumed Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS 10 Furan, Tetrahydro- (CAS 10 Furan, Tetrahydro- (CAS 10 Furan, Tetrahydro- (CAS 10	(CAS 78-93-3) hinistration (DEA). List 1 & 2 (CAS 78-93-3) Mixtures Code Number 4-1) (CAS 78-93-3) (CAS 78-93-3) (CAS 78-93-3) 5 78-93-3) d (CAS 112945-52-5) d Community Right-to-Knov 8-94-1) 5 109-99-9)	6714 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) 35 %WV 35 %WV 6532 6714	
Acetone (CAS 67-64 Methyl ethyl ketone Drug Enforcement Adm Acetone (CAS 67-64 Methyl ethyl ketone DEA Exempt Chemical Acetone (CAS 67-64 Methyl ethyl ketone IS state regulations US. Massachusetts RTK - S Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS Silica, amorphous, fumed US. New Jersey Worker and Acetone (CAS 67-64-1) Cyclohexanone (CAS 10	(CAS 78-93-3) hinistration (DEA). List 1 & 2 4-1) (CAS 78-93-3) Mixtures Code Number 4-1) (CAS 78-93-3) Substance List 8-94-1) 5 78-93-3) d (CAS 112945-52-5) d Community Right-to-Knov 8-94-1) 5 109-99-9) 5 78-93-3)	6714 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) 35 %WV 35 %WV 6532 6714	
Acetone (CAS 67-64 Methyl ethyl ketone Drug Enforcement Adm Acetone (CAS 67-64 Methyl ethyl ketone DEA Exempt Chemical Acetone (CAS 67-64 Methyl ethyl ketone IS state regulations US. Massachusetts RTK - S Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS Silica, amorphous, fume US. New Jersey Worker and Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS 10 Furan, Tetrahydro- (CAS 10 Furan)	(CAS 78-93-3) hinistration (DEA). List 1 & 2 4-1) (CAS 78-93-3) Mixtures Code Number 4-1) (CAS 78-93-3) Substance List 8-94-1) 5 109-99-9) 5 78-93-3) d (CAS 112945-52-5) d Community Right-to-Knov 8-94-1) 5 109-99-9) 5 78-93-3) 9002-86-2)	6714 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) 35 %WV 35 %WV 6532 6714	
Acetone (CAS 67-64 Methyl ethyl ketone Drug Enforcement Adm Acetone (CAS 67-64 Methyl ethyl ketone DEA Exempt Chemical Acetone (CAS 67-64 Methyl ethyl ketone JS state regulations US. Massachusetts RTK - S Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS Silica, amorphous, fumed Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS Polyvinyl chloride (CAS 5	(CAS 78-93-3) hinistration (DEA). List 1 & 2 4-1) (CAS 78-93-3) Mixtures Code Number 4-1) (CAS 78-93-3) Substance List 8-94-1) 5 109-99-9) 5 78-93-3) d (CAS 112945-52-5) d Community Right-to-Know 8-94-1) 5 109-99-9) 5 78-93-3) 9002-86-2) nd Community Right-to-Know	6714 2 Exempt Chemical Mixtures (21 CFR 1310.12(c)) 35 %WV 35 %WV 6532 6714	

Methyl ethyl ketone (CAS 78-93-3) Silica, amorphous, fumed (CAS 112945-52-5)

US. Rhode Island RTK

Acetone (CAS 67-64-1) Cyclohexanone (CAS 108-94-1) Furan, Tetrahydro- (CAS 109-99-9) Methyl ethyl ketone (CAS 78-93-3)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	05-27-2015
Revision date	-
Version #	01
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0
NFPA ratings	2 0

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.







MATERIAL SAFETY DATA SHEET

MSDS Number:

1106E

Section 1	PRODUCT AND COMPANY IDENTIFICATION
Trade Name:	OATEY ALL PURPOSE CEMENT
Product Nos.:	Milky - 30818, 30821, 30834, 30847, 30848, 31650, 31651, 32208, 32209
Product Use:	Cement for PVC, CPVC and ABS pipe
Formula:	PVC and CPVC Resin in Solvent Solution
Synonyms:	None
Firm Name &	Oatey Company 4700 West 160th Street, Cleveland, Ohio 44135
Address:	www.oatey.com
Firm Phone No:	(216) 267-7100
Emergency Phone	For Emergency First Aid call 1-877-740-5015. For chemical transportation
Nos.:	emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-
	703-527-3887.
Prepared by:	Technical Department
Preparation Date:	10/01/2009

Section 2 HAZARDS IDENTIFICATION

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Emergency Overview:
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Milky
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liquid with an ether-like odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting, diarrhea and kidney or liver disorders. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.

Section 3 COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENTS:</u> Tetrahydrofuran	<u>%wt/wt :</u> 30 - 45%	CAS NUMBER: 109-99-9	<u>ACGIH TLV TWA:</u> 50 ppm(skin)	<u>OSHA PEL TWA</u> 200 ppm	<u>OTHER:</u> 25 ppm (Mfg)
Methyl Ethyl Ketone	8 - 18%	78-93-3	100 ppm STEL 200 ppm 300 ppm STEL	200 ppm	None
Acetone	10 - 20%	67-64-1	500 ppm 500 ppm 750 ppm STEL	1000 ppm	None
PVC Resin (Non-hazardous)	8 - 15%	9002-86-2	10 mg/m3	15 mg/m3	None
CPVC Resin (Non-hazardous)	3 - 7%	68648-82-8	10 mg/m3	None Established	None
Cyclohexanone	10 - 20%	108-94-1	20 ppm(skin) 50 ppm STEL	50 ppm	None
Amorphous Fumed Silica (Non-hazardous)	1 - 5%	112945-52-5	10 mg/m3	None Established	None a

OSHA Hazard Classification:

Flammable, irritant, organ effects

Section 4 FIRST AID MEASURES

Skin: Remove contaminated clothing immediately. Wash all exposed areas with soap and

water. Get medical attention if irritation develops. Remove dried cement with hand cleaner or baby oil. If material gets into eyes or if fumes cause irritation, immediately flush eyes Eyes: with plenty of water until chemical is removed. If irritation persists, get medical attention immediately. Inhalation: If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention. Ingestion: DO NOT INDUCE VOMITING. Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital. Section 5 FIRE FIGHTING MEASURES 14 - 23 Degrees F. (-10 to -5 Degrees C) / CCCFP Flashpoint / Method: Flammability: LEL = 1.8 % Volume, UEL = 11.8 % Volume Extinguishing Use dry chemical, CO2, or foam to extinguish fire. Cool fire exposed container Media: with water. Water may be ineffective as an extinguishing agent. Firefighters should wear positive pressure self-contained breathing apparatus Special Fire and full protective clothing for fires in areas where chemicals are used or Fighting Procedure: stored Unusual Fire Extremely flammable liquid. Keep away from heat and all sources of ignition And Explosion including sparks, flames, lighted cigarettes and pilot lights. Containers may Hazards: rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age. Combustion will produce toxic and irritating vapors including carbon monoxide, Hazardous Decomposition carbon dioxide and hydrogen chloride. Products:

Section 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak Remove all sources of ignition and ventilate area. Stop leak if it can be done Procedures: without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with an inert absorbent such as sand, earth or other noncombusting material. Put absorbent material in covered, labeled metal containers. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required. See Section 13 for disposal information.

Section 7 HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.

Storage: Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.

Other: "Empty" containers retain product residue and can be hazardous. Follow all MSDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way

that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.
For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance
with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.
Rubber gloves are suitable for normal use of the product. For long exposures
chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm)
to avoid prolonged skin contact.
Safety glasses with side shields or safety goggles.

Section 9 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:
Melting Point:
Vapor Pressure:
Vapor Density:
Volatile Components:
Solubility In Water:
pH:
Specific Gravity:
Evaporation Rate:
Appearance:
Odor:
Will Dissolve In:
Material Is:

151 Degrees F / 66 Degrees	С
Not applicable	
145 mmHg @ 20 Degrees C	
(Air = 1) 2.5	
80-84%	
Negligible	
Not applicable	
0.94 +/- 0.02 @ 20 Degrees	С
(BUAC = 1) = 5.5 - 8.0	
Milky Liquid	
Ether-Like	
Tetrahydrofuran	
Liquid	

Section 10 ST	ABILITY AND REACTIVITY
Stability:	Stable.
Conditions To	Avoid heat, sparks, flames and other sources of ignition.
Avoid:	
Hazardous	Combustion will produce toxic and irritating vapors including carbon
Decomposition	monoxide, carbon dioxide and hydrogen chloride.
Products:	
Incompatibility/	Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds,
Materials To	chlorinated inorganics (potassium, calcium and sodium hypochlorite) and
Avoid:	hydrogen peroxides. May attack plastic, resins and rubber.
Hazardous	Will not occur.
Polymerization:	

Section 11 Inhalation:	TOXICOLOGICAL INFORMATION Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.
Skin:	May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.
Eye:	Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.
Ingestion:	Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.
Chronic Toxicity:	Prolonged or repeated overexposure cause dermatitis and damage to the kidney, liver, lungs and central nervous system.

Toxicity Data:	Acetone:	Oral rat LD50: 5,800 mg/kg
		Inhalation rat LC50: 50,100 mg/m3/8 hours
	Cyclohexanone:	Oral rat LD50: 1,620 mg/kg
		Inhalation rat LC50: 8,000 ppm/4 hours
		Skin rabbit LD50: 1 mL/kg
	Tetrahydrofuran:	Oral rat LD50: 1,650 mg/kg
	-	Inhalation rat LC50: 21,000 ppm/3 hours
	Methyl Ethyl Ketone:	Oral rat LD50: 2,737 mg/kg
	1 1	Inhalation rat LC50: 23,500 mg/m3/8 hours
		Skin rabbit LD50: 6,480 mg/kg
Sensitization:	None of the components	are known to cause sensitization.
Carcinogenicity	—	are listed as a carcinogen or suspect carcinogen by
carernogenierej	_	National Toxicology Program has reported that
		ats to tetrahydrofuran (THF) vapor levels up to 1800
		eek for their lifetime caused an increased incidence
		e rats and liver tumors in female mice. The
	-	Eindings for human health is unclear at this time, and
		ties specific" effects. Elevated incidences of tumors
		n reported for THF. ACGIH has classified
	-	d tetrahydrofuran as "A3," Confirmed Animal
	Carcinogens with Unknow	
Mutagenicity:	-	positive in bacterial and mammalian assays. Acetone,
		l tetrahydrofuran are generally thought not to be
	mutagenic.	
Reproductive		a cyclohexanone have been shown to cause embryofetal
Toxicity:	-	ects in laboratory animals. Acetone and
	-	en found to cause adverse developmental effects only
	—	ause other toxic effects to the mother.
Medical	_	ng skin, lung, kidney or liver disorders may be at
Conditions	increased risk from exp	posure to this product.
Aggravated By		
Exposure:		
Section 12	ECOLOGICAL INFORMATION	
	This product is not expect	ed to be toxic to aquatic organisms.
	Cyclohexanone: 96 hour LC5	50 values for fish is over 100 mg/l.
	Tetrahydrofuran: 96 hour I	LC50 fathead minnow: 2160 mg/L.
	Acetone: 96 hour LC50 for	fish is greater than 100 mg/L.
		our LC50 for fish is greater than 100 mg/L.
1100		

VOC This product emits VOC's (volatile organic compounds) in its use. Make sure Information: that use of this product complies with local VOC emission regulations, where they exist.

VOC Level: Maximum 510 g/L per SCAQMD Test Method 316A.

Section 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose in accordance with current local, state and federal regulations. RCRA Hazardous Waste U002, U057, U159, U213 Number: EPA Hazardous Waste D001, D035, F003, F0005 ID Number: EPA Hazard Waste Ignitable Waste. Toxic Waste (Methyl Ethyl Ketone content) Number:

Section 14 TRANSPORT INFORMATION

DOT	Less than 1 Liter (0.3	Greater than 1 Liter (0.3
	gal)	gal)

UN/NA Number: Proper Shipping Name: Hazard Class: Packing Group:	None Consumer Commodity ORM-D None	UN1133 Adhesives 3 PGII
Hazard Labels:	None	Flammable Liquid
IMDG		
UN Number:	UN1133	UN1133
Proper Shipping Name:	Adhesives	Adhesives
Hazard Class:	3	3
Packing Group:	II	II
Label:	None (Limited Quantities are expected from labeling)	Class 3 (Flammable Liquid)
Flashpoint (deg C)	-10 to -5 Degrees C	-10 to -5 Degrees C

2008 North American Emercency Response Guidebook Number: 127

Section 15 REGULATORY INFORMATION

Hazard Category for Acute Health, Chronic Health, Flammable Section 311/312:

Section 302	This product does not contain chemicals regulated under SARA Section 302.
Extremely Hazardous	
Substances (TPQ):	
Section 313 Toxic	This product does not contain chemicals subject to SARA Title III Section
Chemicals:	313 Reporting requirements.
CERCLA 103	Spills of this product over the RQ (reportable quantity) must be reported
Reportable	to the National Response Center. The RQ for the product, based on the RQ
Quantity:	for Tetrahydrofuran (45% maximum) of 1,000 lbs, is 2,222 lbs.
	Many states have more stringent release reporting requirements. Report
	spills required under federal, state and local regulations.
California	This product contains trace amounts of chemicals known to the State of
Proposition 65:	California to cause cancer. Under normal use conditions, exposure to
	these chemicals at levels above the State of California "No Significant
	Risk Level" (NSRL) are unlikely. The use of proper personal protective
	equipment (PPE) and ventilation guidelines noted in Section 8 will
	minimize exposure to these chemicals.
TSCA Inventory	All of the components of this product are listed on the TSCA inventory.
Canadian WHIMS	Class B, Division 2; Class D, Division 2, Subdivision B; Class D,
Classification:	Division 2, Subdivision A. This product has been classified in accordance
	with the hazard criteria of the Controlled Products Regulations (CPR) and
	the MSDS contains all the information required by the CPR.
Section 16	OTHER INFORMATION
NFPA and HMIS:	

NFPA Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 Special: None HMIS Hazard Signal: Health: 2* Flammability: 3 Reactivity: 1 PPE: G

Disclaimer:

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, we cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.

Template: tmpl-us-e1

Thread Sealant, Oils, Lube's

Contents:

1. WHITE PIPE COMPOUND 2. #5 PASTE 3. LEAK DETECTOR 4. CLEAR CUTTING OIL 5. DARK CUTTING OIL





GHS SAFETY DATA SHEET

 Date Revised:
 APR 2015

 WELD-ON[®] White Seal Plus Pipe Joint Compound
 Supersedes:
 MAR 2015

SECTION I - PRODUCT AND COMPANY IDENTIFICATION PRODUCT NAME: WELD-ON® White Seal Plus Pipe Joint Compound PRODUCT USE: Pipe Thread Sealant SUPPLIER: MANUFACTURER: IPS Corporation 17109 South Main Street, Gardena, CA 90248-3127 P.O. Box 379, Gardena, CA 90247-0379 Tel. 1-310-898-3300 EMERGENCY: Transportation: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International) Medical: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International) **SECTION 2 - HAZARDS IDENTIFICATION** GHS CLASSIFICATION: Health Environmental Physical Acute Toxicity: None Known Acute Toxicity: None Known None Known Skin Irritation: Chronic Toxicity: None Known Category 3 Skin Sensitization: None Known Eye Category 2 GHS LABEL: Signal Word: WHMIS CLASSIFICATION Warning Not Regulated Hazard Statements Precautionary Statements H317: May cause an allergic skin reaction P262: Do not get in eyes, on skin, or on clothing P271: Use only outdoors or in a well-ventilated area 233: Keep container tightly closed SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS EINECS # REACH CONCENTRATION CAS# Pre-registration Number % by Weight No hazardous ingredients as defined by OSHA Hazard Communication Standard 29 CFR 1910.1200 All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing. *Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372). # indicates that this chemical is found on Proposition 65's List of chemicals known to the State of California to cause cancer or reproductive toxicity. SECTION 4 - FIRST AID MEASURES Contact with eyes: Flush eyes immediately with large amounts of water for at lease 15 minutes. Flush under both upper and lower lids. Seek medical aid. Skin contact: Wash from skin with soap and water. If irritation develops, seek medical aid. Inhalation: Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice. Ingestion: Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately. Likely Routes of Exposure: Eve and Skin Contact Acute symptoms and effects: Inhalation: None Known Eye Contact: May cause minor irritation, but no corneal injury Skin Contact: Repeated and/or prolonged contact with the skin may cause irritation. Ingestion: None Known Chronic (long-term) effects **SECTION 5 - FIREFIGHTING MEASURES** Suitable Extinguishing Media: Carbon dioxide, foam or dry chemical HMIS NFPA 0-Minimal Unsuitable Extinguishing Media: None known Health 1-Slight 1 Exposure Hazards: Irritating organic vapors Flammability 2-Moderate 1 Reactivity Combustion Products: No information available 0 0 3-Serious PPE в 4-Severe Protection for Firefighters: Self-contained breathing apparatus or full-face positive pressure air-supply masks SECTION 6 - ACCIDENTAL RELEASE MEASURES Personal precautions: Prevent contact with skin or eyes (see Section 8) **Environmental Precautions:** Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course. Methods for Cleaning up: Soak up with inert absorbent material. Store in a partly filled, closed container until disposal SECTION 7 - HANDLING AND STORAGE Handling: Avoid avoid contact with eves, skin and clothing Do not eat, drink or smoke while handling. Store below 54°C (130°F) to preserve shelf live. Keep container tightly closed when not in use. Storage: Follow all precautionary information on container label and product bulletins. SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION CAL/OSHA OSHA Component ACGIH TI V ACGIH STEL OSHA PEL OSHA STEL CAL/OSHA PE CAL/OSHA STEL EXPOSURE LIMITS: PEL-Ceiling Ceiling No Hazardous Ingredients N/E N/E N/F N/E N/F N/F N/F N/F Engineering Controls: Use local exhaust as needed Monitoring: Maintain breathing zone airborne concentrations below exposure limits. Personal Protective Equipment (PPE): Eye Protection: Avoid contact with eyes, wear splashproof chemical goggles. Skin Protection: Prevent contact with the skin as much as possible. Chemical resistant gloves should be used for frequent immersion. Use of rubber or plastic gloves should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds. Respiratory Protection: None needed for normal use



GHS SAFETY DATA SHEET

WELD-ON[®] White Seal Plus Pipe Joint Compound

Date Revised: APR 2015 Supersedes: MAR 2015

SECTION 9 - PHYS	SICAL AND CHEMIC	AL PROPERTIES				
Appearance:	White paste					
Odor:	None					
pH:	Not Applicabl	e		Evaporation Rate:	N/A	
Boiling Point:	Not Applicabl			Flammability:	None Known	
Flash Point:	>232°C (450			Flammability Limits:	LEL: Not Established	
Specific Gravity:	1.28 @26.6°				UEL: Not Established	
Solubility:	Neglibible	3 (00 1)		Vapor Pressure:	< 10mm @ 26.6°C (80°F)	
Auto-ignition Tempe				Vapor Density:	N/A	
				VOC Content:	0%	
Decomposition Tem	BILITY AND REACT			voc content:	0%	
Stability:	141	Stable (Under Normal Ccor	iditions)			
Hazardous decompo		None (Non-Thermal)				
Conditions to avoid						
Incompatible Materi	als: Avoid Contar	nination With Base Materials				
SECTION 11 - TOX	(ICOLOGICAL INFOR	RMATION				
Toxicity:		L	_D50	LC50		
-	None Known		N/A	N/A		
Reproductive Effects Not Established	<u>Teratogenicity</u> Not Established	<u>Mutagenicity</u> Not Established	Embryotoxicity Not Established	Sensitization to Product Not Established	Synergistic Products Not Established	
	DLOGICAL INFORMA					
Ecotoxicity:	None Known					
Mobility:	Not Established					
Degradability:	Not Established					
Bioaccumulation:	Not Established					
SECTION 13 - WASTE DISPOSAL CONSIDERATIONS Incinerate in accordance with local and national regulations. Consult local disposal expert.						
Incinerate in accordance			l expert.			
	with local and national regul	ations. Consult local disposa	l expert.			
SECTION 14 - TRA	with local and national regul	ations. Consult local disposa	l expert.			
SECTION 14 - TRA Proper Shipping Name	with local and national regul NSPORT INFORMAT None	ations. Consult local disposa	l expert.			
SECTION 14 - TRA Proper Shipping Name Hazard Class:	with local and national regul NSPORT INFORMAT None Not Regulate	ations. Consult local disposa	l expert.			
SECTION 14 - TRA Proper Shipping Name Hazard Class: Secondary Risk:	with local and national regul NSPORT INFORMAT None Not Regulate None	ations. Consult local disposa				
SECTION 14 - TRA Proper Shipping Name Hazard Class: Secondary Risk: Identification Number:	with local and national regul NSPORT INFORMAT None Not Regulate None None	ations. Consult local disposa	TDC	3 INFORMATION		
SECTION 14 - TRA Proper Shipping Name Hazard Class: Secondary Risk: Identification Number: Packing Group:	with local and national regul NSPORT INFORMAT None None None None None	ations. Consult local disposa	TDG CLASS:	Not Regulate		
SECTION 14 - TRA Proper Shipping Name Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required:	with local and national regul NSPORT INFORMAT None None None None None None	ations. Consult local disposa	TDG CLASS: SHIPPING NAME:	Not Regulate Not Regulate	ed	
SECTION 14 - TRA Proper Shipping Name Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant:	with local and national regul NSPORT INFORMAT None None None None None None None NO	ations. Consult local disposa	TDG CLASS:	Not Regulate Not Regulate	ed	
SECTION 14 - TRA Proper Shipping Name Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant:	with local and national regul NSPORT INFORMAT None None None None None None	ations. Consult local disposa	TDG TDG CLASS: SHIPPING NAME: UN NUMBER/PACKING GR	Not Regulate Not Regulate ROUP: Not Regulate	ed ed	
SECTION 14 - TRA Proper Shipping Name Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant:	with local and national regul NSPORT INFORMAT None None None None None None NO SULATORY INFORM	ations. Consult local disposa	TDG CLASS: SHIPPING NAME:	Not Regulate Not Regulate ROUP: Not Regulate	ed ed	
SECTION 14 - TRA Proper Shipping Name Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant: SECTION 15 - REC	with local and national regul NSPORT INFORMAT None None None None None None NO SULATORY INFORM	ations. Consult local disposa	TDG TDG CLASS: SHIPPING NAME: UN NUMBER/PACKING GR Ingredient Listings: USA TS	Not Regulate Not Regulate ROUP: Not Regulate	ed ed da DSL, Australia	
SECTION 14 - TRA Proper Shipping Name Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant: SECTION 15 - REC Precautionary Label	with local and national regul NSPORT INFORMAT None None None None None NO SULATORY INFORM/ Information: Irritant	ations. Consult local disposa ION d as a hazardous material ATION	TDG TDG CLASS: SHIPPING NAME: UN NUMBER/PACKING GR Ingredient Listings: USA TS	Not Regulate Not Regulate ROUP: Not Regulate CA, Europe EINECS, Canad	ed ed da DSL, Australia	
SECTION 14 - TRA Proper Shipping Name Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant: SECTION 15 - REC Precautionary Label Symbols: Risk Phrases:	with local and national regul NSPORT INFORMAT None Not Regulate None None None NO SULATORY INFORM/ Information: Irritant Xi R-36/38 Irritating to eyes an	ations. Consult local disposa ION d as a hazardous material ATION	TDG CLASS: SHIPPING NAME: UN NUMBER/PACKING GR Ingredient Listings: USA TS AICS, K	Not Regulate Not Regulate ROUP: Not Regulate CA, Europe EINECS, Canac orea ECL/TCCL, Japan MIT	ed da DSL, Australia I (ENCS)	
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SECTION 14 - TRA Proper Shipping Name Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant: SECTION 15 - REC Precautionary Label Symbols: Risk Phrases: Safety Phrases:	with local and national regul NSPORT INFORMAT None None None None None None No SULATORY INFORM/ Information: Irritant Xi R-36/38 Irritating to eyes ar S-2/3 Keep in a cool place S-7 Keep container tightly S-24/25 Avoid contact with S-35 Dispose of material a	ations. Consult local disposa ION d as a hazardous material ATION ad skin. , out of reach of children. closed when not in use. skin and eyes.	TDG CLASS: SHIPPING NAME: UN NUMBER/PACKING GR Ingredient Listings: USA TS AICS, K S-29 Do no S-37/39 We S-45 If seek	Not Regulate Not Regulate ROUP: Not Regulate CA, Europe EINECS, Canac orea ECL/TCCL, Japan MIT t empty into drains, storm dr ar suitable gloves and eye p	ed ed da DSL, Australia I (ENCS) ains or watercourses. rotection.	
SECTION 14 - TRA Proper Shipping Name Hazard Class: Secondary Risk: Identification Number: Packing Group: Label Required: Marine Pollutant: SECTION 15 - REC Precautionary Label Symbols: Risk Phrases: Safety Phrases: SECTION 16 - OTH	with local and national regul NSPORT INFORMAT None None None None None None No SULATORY INFORM/ Information: Irritant Xi R-36/38 Irritating to eyes ar S-2/3 Keep in a cool place S-7 Keep container tightly S-24/25 Avoid contact with S-35 Dispose of material a IER INFORMATION	ations. Consult local disposa ION d as a hazardous material ATION ad skin. , out of reach of children. closed when not in use. skin and eyes.	TDG CLASS: SHIPPING NAME: UN NUMBER/PACKING GR Ingredient Listings: USA TS AICS, K S-29 Do no S-37/39 We S-45 If seek	Not Regulate Not Regulate <u>ROUP: Not Regulate</u> RCA, Europe EINECS, Canac orea ECL/TCCL, Japan MIT t empty into drains, storm dr ar suitable gloves and eye p ing medical advice show phy	ed ed da DSL, Australia I (ENCS) ains or watercourses. rotection.	
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This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.





SAFETY DATA SHEET

1. Identification

Product identifier	Oatey No. 5 Paste Flux		
Other means of identification			
SDS number	1610E		
Synonyms	Part Numbers: No 5- 30011, 30013, 30014, 30038, 30041, 48307, 48420, 48421, 48422, 48423, 53017, 53060, 53200, Hot Weather- 30062		
Recommended use	Joining Copper Pipes. Joining Copper Tubing.		
Recommended restrictions	None known.		
Manufacturer/Importer/Supplier/Distributor information			
Company Name	Oatey Co.		
Address	4700 West 160th St.		
	Cleveland, OH 44135		
Telephone	216-267-7100		
E-mail	info@oatey.com		
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)		
Emergency First Aid	1-877-740-5015		
Contact person	MSDS Coordinator		
2. Hazard(s) identification			

2. Hazaru(5) l

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1
OSHA defined hazards	Not classified.	

Label elements



Signal word	Danger
Hazard statement	Causes severe skin burns and eye damage.
Precautionary statement	
Prevention	Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dusts or mists.
Response	If swallowed: Rinse mouth. Do not induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information Not applicable.	

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Petrolatum	8009-03-8	60-100

Zinc chloride	7646-85-7	10-30
Water	7732-18-5	3-7
Ammonium chloride	12125-02-9	1-5

4. First-aid measures

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Continue rinsing. Call a physician or poison control center immediately. Remove contact lenses, if present and easy to do.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
5. Fire-fighting measures	
5. Fire-fighting measures	protect themselves.
5. Fire-fighting measures Suitable extinguishing media Unsuitable extinguishing	water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
5. Fire-fighting measures Suitable extinguishing media Unsuitable extinguishing media Specific hazards arising from	protect themselves. Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Do not use water jet as an extinguisher, as this will spread the fire.
5. Fire-fighting measures Suitable extinguishing media Unsuitable extinguishing media Specific hazards arising from the chemical Special protective equipment	protect themselves. Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Do not use water jet as an extinguisher, as this will spread the fire. During fire, gases hazardous to health may be formed.
5. Fire-fighting measures Suitable extinguishing media Unsuitable extinguishing media Specific hazards arising from the chemical Special protective equipment and precautions for firefighters Fire fighting	protect themselves. Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Do not use water jet as an extinguisher, as this will spread the fire. During fire, gases hazardous to health may be formed. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
5. Fire-fighting measures Suitable extinguishing media Unsuitable extinguishing media Specific hazards arising from the chemical Special protective equipment and precautions for firefighters Fire fighting equipment/instructions	protect themselves. Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Do not use water jet as an extinguisher, as this will spread the fire. During fire, gases hazardous to health may be formed. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Use water spray to cool unopened containers.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike far ahead of spill for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage	
Precautions for safe handling	Do not get this material in contact with eyes. Do not get this material in contact with skin. Avoid prolonged exposure. Do not get this material on clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage.	Store locked up. Store in original tightly closed container. Store away from incompatible materials

Conditions for safe storage, including any incompatibilities Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	Form
Petrolatum (CAS 8009-03-8)	PEL	5 mg/m3	Mist.
Zinc chloride (CAS 7646-85-7)	PEL	1 mg/m3	Fume.
US. ACGIH Threshold Limi	t Values		
Components	Туре	Value	Form
Ammonium chloride (CAS 12125-02-9)	STEL	20 mg/m3	Fume.
,	TWA	10 mg/m3	Fume.
Petrolatum (CAS 8009-03-8)	TWA	5 mg/m3	Inhalable fraction.
Zinc chloride (CAS 7646-85-7)	STEL	2 mg/m3	Fume.
·	TWA	1 mg/m3	Fume.
US. NIOSH: Pocket Guide t	o Chemical Hazards		
Components	Туре	Value	Form
Ammonium chloride (CAS 12125-02-9)	STEL	20 mg/m3	Fume.
	TWA	10 mg/m3	Fume.
Petrolatum (CAS 8009-03-8)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
Zinc chloride (CAS 7646-85-7)	STEL	2 mg/m3	Fume.
	TWA	1 mg/m3	Fume.
logical limit values	No biological exposure limits noted f	•	
osure guidelines	Occupational Exposure Limits are no	ot relevant to the current physic	al form of the product.
propriate engineering trols	Good general ventilation (typically 10 should be matched to conditions. If a or other engineering controls to mair exposure limits have not been estab wash facilities and emergency show	applicable, use process enclosu tain airborne levels below reco lished, maintain airborne levels	ures, local exhaust ventilatio ommended exposure limits. I to an acceptable level. Eye
•	s, such as personal protective equipn		
Eye/face protection	Wear safety glasses with side shield	s (or goggles) and a face shield	d.
Skin protection			
Hand protection	Wear appropriate chemical resistant	gloves.	
Other	Wear appropriate chemical resistant	clothing.	
Respiratory protection	In case of insufficient ventilation, we	ar suitable respiratory equipme	nt.
Thermal hazards	Wear appropriate thermal protective	clothing, when necessary.	
neral hygiene siderations	Always observe good personal hygic and before eating, drinking, and/or s equipment to remove contaminants.		

9. Physical and chemical properties

Appearance		
Physical state	Solid.	
Form	Solid. Paste.	
Color	Not available.	
Odor	Not available.	
Odor threshold	Not available.	
рН	Not available.	

Melting point/freezing point	Not available.
Initial boiling point and boiling range	638 °F (336.67 °C)
Flash point	540.0 °F (282.2 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or expl	losive limits
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	>1
Relative density	1.1
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	20000 - 40000 cP
Other information	
VOC (Weight %)	29 g/l 3% by weight
10. Stability and reactivity	
Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.
11. Toxicological informat	ion

Information on likely routes of exposu

Skin sensitization

Information on likely routes of e	xposure
Inhalation	Prolonged inhalation may be harmful. May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Information on toxicological effe	ects
Acute toxicity	Not available.
Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory or skin sensitizatior	1

This product is not expected to cause skin sensitization.

Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.		
Carcinogenicity	None known.		
IARC Monographs. Overall I	Evaluation of Carcinogenicity		
Petrolatum (CAS 8009-03 OSHA Specifically Regulate Not listed.	3-8) 3 Not classifiable as to carcinogenicity to humans. d Substances (29 CFR 1910.1001-1050)		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.		
Specific target organ toxicity - single exposure	Not classified.		
Specific target organ toxicity - repeated exposure	Not classified.		
Aspiration hazard	Not available.		
Chronic effects	Prolonged inhalation may be harmful.		
12. Ecological information			
Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.		
Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential	No data available.		
Mobility in soil	No data available.		
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according toNot applicable.Annex II of MARPOL 73/78 andthe IBC Code

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

Australia Canada Canada China Europe Europe Japan Korea	Non-Domestic Substances Inventory of Existing Cherr European Inventory of Exis Substances (EINECS) European List of Notified C Inventory of Existing and N Existing Chemicals List (E0	nical Substances in Cl sting Commercial Che Chemical Substances Iew Chemical Substan	emical (ELINCS)	י ץי ץי ז
Australia Canada Canada China Europe Europe	Inventory of Existing Chem European Inventory of Exis Substances (EINECS) European List of Notified C	nical Substances in Cl sting Commercial Che Chemical Substances	emical (ELINCS)	Yı Yı I
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Australia Canada Canada China	Inventory of Existing Chem European Inventory of Exis	nical Substances in Cl	· · · ·	Y
Australia Canada Canada			hina (IECSC)	
Australia Canada	Non-Domestic Substances	s List (NDSL)		ľ
Australia		. ,		ľ
	Domestic Substances List		- /	Y
Country(s) or region	Inventory name Australian Inventory of Che	emical Substances (A	ICS)	On inventory (yes/no Ye
nternational Inventories				
California Safe Drinking any chemicals currently	Water and Toxic Enforcemen listed as carcinogens or repro		ition 65): This materia	al is not known to contain
Zinc chloride (CAS 7646 US. California Proposition	,			
Ammonium chloride (CA				
US. Rhode Island RTK	,			
Zinc chloride (CAS 7646				
Ammonium chloride (CA Petrolatum (CAS 8009-0				
	and Community Right-to-Kn	ow Law		
Zinc chloride (CAS 7646	S-85-7)			
Ammonium chloride (CA Petrolatum (CAS 8009-0	•			
	d Community Right-to-Know	w Act		
Zinc chloride (CAS 7646				
Petrolatum (CAS 8009-0	03-8)			
Ammonium chloride (CA				
JS state regulations US. Massachusetts RTK - S	Substance List			
(SDWA)				
Safe Drinking Water Act	Not regulated.			
Not regulated.				
	n 112(r) Accidental Release	Prevention (40 CFR	68.130)	
Not regulated.				
•	n 112 Hazardous Air Polluta	ants (HAPs) List		
Other federal regulations				
Zinc chloride Ammonium chloride		7646-85-7 12125-02-9	10-30 1-5	
Chemical name		CAS number	% by wt.	
SARA 313 (TRI reporting)				
chemical	-			
Not listed. SARA 311/312 Hazardous	No			
SARA 302 Extremely hazar	rdous substance			
Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No			
Superfund Amendments and R	-	SARA)		
Zinc chloride (CAS 7646	6-85-7)	LISTED		
AMMONIUM CHIONQE (CA		LISTED		
Ammonium chloride (CA	2000 Liet (10 CED 202 1)			
CERCLA Hazardous Subst				

Country(s) or region	Inventory name	On inventory (yes/no)*
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	26-October-2014
Revision date	19-February-2015
Version #	03
HMIS [®] ratings	Health: 3 Flammability: 0 Physical hazard: 0
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for use, handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.



SAFETY DATA SHEET



1. Identification

Product identifier	Oatey Leak Detector	
Other means of identification		
Synonyms	Part Numbers: 30209, 30211, 30212	
Recommended use	Finding leaks in plumbing systems.	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplie	er/Distributor information	
Company Name	Oatey Co.	
Address	4700 West 160th St.	
	Cleveland, OH 44135	
Telephone	216-267-7100	
E-mail	info@oatey.com	
Trononort Emorgonov	Chamtron 1 800 424 0200 (Outside the US 1 702 527 2007	

E-mail	info@oatey.com
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)
Emergency First Aid	1-877-740-5015
Contact person	MSDS Coordinator

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Not classified.
OSHA defined hazards	Not classified.
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Propane -1,2 -diol	57-55-6	40-60
Water	7732-18-5	30-50
Other components below reportable levels		5

Other components below reportable levels

All concentrations are in percent by weight (kg) unless ingredient is a gas. Gas concentrations are in percent by volume (I).

4. First-aid measures	
Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.

Oatey Leak Detector

Ingestion Most important symptoms/effects, acute and delayed	Rinse mouth. Get medical attention if symptoms occur. Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
5. Fire-fighting measures	
Suitable extinguishing media	Alcohol resistant foam. Powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Move containers from fire area if you can do so without risk.

Specific methodsUse standard firefighting procedures and consider the hazards of other involved materials.General fire hazardsNo unusual fire or explosion hazards noted.

6. Accidental release measures

Fire fighting

equipment/instructions

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Use water spray to reduce vapors or divert vapor cloud drift. This product is miscible in water. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
	Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Environmental precautions	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handlingAvoid prolonged exposure. Observe good industrial hygiene practices.Conditions for safe storage,
including any incompatibilitiesStore in original tightly closed container. Store away from incompatible materials (see Section 10
of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Туре	Value	Form
Propane -1,2 -diol (CAS 57-55-6)	TWA	10 mg/m3	Aerosol.
Biological limit values	No biological exposure limits noted	for the ingredient(s).	
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.		
Individual protection measure Eye/face protection	s, such as personal protective equipr Wear safety glasses with side shield		

Skin protection		
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.	
Skin protection		
Other	Wear suitable protective clothing.	
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.	
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.	
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.	

9. Physical and chemical properties

	•
Appearance	
Physical state	Liquid.
Form	Liquid.
Color	Blue
Odor	Soapy.
Odor threshold	Not available.
рН	7 - 9
Melting point/freezing point	Not applicable.
Initial boiling point and boiling	Not determined.
range	
Flash point	> 199.0 °F (> 92.8 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or exp	losive limits
Flammability limit - lower	Not available.
(%) 	N. 6 9111
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - lower (%) temperature	Not available.
Explosive limit - upper (%)	Not available.
Explosive limit - upper (%)	Not available.
temperature	
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	1.03 - 1.08 g/cm3
Solubility(ies)	
Solubility (water)	Infinite.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
VOC (Weight %)	50 % by weight or 525 g/L
	So /s by weight of 525 g/L

10. Stability and reactivity

Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	When heated to decomposition the product emits acrid smoke and irritating fumes.

11. Toxicological information

Information on likely	routes of exposure
-----------------------	--------------------

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Components	Species	Test Results	
Propane -1,2 -diol (CAS 57-55-6)			
Acute			
Dermal			
LD50	Rabbit	20800 mg/kg	
Oral			
LD50	Rat	22000 mg/kg	

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.	
Respiratory or skin sensitization	1	
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Not listed.		
NTP Report on Carcinogens		
Not listed.		
	d Substances (29 CFR 1910.1001-1050)	
Not regulated.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not an aspiration hazard.	
Chronic effects	Prolonged inhalation may be harmful.	
12. Ecological information		

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Ecotoxicity

Bioaccumulative potential

Partition coefficient n-octan Propane -1,2 -diol (CAS 57-55	(8)	-0.92
Mobility in soil No data available.		
Other advarage offecto	No other adverse environment	al offacto (o a

Other adverse effectsNo other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation
potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

ΙΑΤΑ

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Not established. Annex II of MARPOL 73/78 and the IBC Code

15. Regulatory information

US federal regulations

This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous No chemical

SARA 313 (TRI reporting) Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated. Safe Drinking Water Act Not regulated. (SDWA)

US state regulations

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Propane -1,2 -diol (CAS 57-55-6)

US. Pennsylvania Worker and Community Right-to-Know Law

Propane -1,2 -diol (CAS 57-55-6)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	01-February-2016
Revision date	-
Version #	01
Further information	HMIS Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard NFPA Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe
HMIS® ratings	Health: 0 Flammability: 1 Physical hazard: 0
NFPA ratings	

Disclaimer

Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.





SAFETY DATA SHEET

1. Identification	
Product identifier	Oatey Clear Cutting Oil
Other means of identification	
Product code	
Synonyms	Part Numbers: 30200, 30201, 30202
Recommended use	Cutting oil for hand threaded or high speed thread cutting machines.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier	/Distributor information
Company Name	Oatey Inc.
Address	4700 West 160th Street
	Cleveland, OH 44135
Telephone	216-267-7100
E-mail	info@oatey.com
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)
Emergency First Aid	1-877-740-5015
Contact person	MSDS Coordinator
2. Hazard(s) identification	
Physical hazards	Not Classified.
Health hazards	Not Classified
OSHA defined hazards	Not Classified.
Label elements	
Hazard symbol	None.
Signal word	None
Hazard statement	This product does not require any hazard statements.
Precautionary statement	
Prevention	This product does not require any precautionary statements.
Response	This product does not require any precautionary statements.
Storage	Not applicable.
Disposal	Not applicable.
Hazard(s) not otherwise classified (HNOC)	Used Oil may contain harmful impurities.
3 Composition/informatio	n on ingredients

3. Composition/information on ingredients

Mixtures

Chemical name		CAS number	%	
Petroleum Hydrocarbon Mixture		Mixture	>95	_
4. First-aid measures				_
Inhalation	Remove victim to fresh air and keep at r attention if symptoms occur.	rest in a position comfortable f	or breathing. Get m	nedical
Skin contact	Flush contaminated skin with plenty of w medical attention if symptoms occur.	vater. Remove contaminated	clothing and shoes.	Get
Eye contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.			
Ingestion	Wash out mouth with water. Remove vio for breathing. If material has been swall quantities of water to drink. Do not induc	ctim to fresh air and keep at re owed and the exposed persor	est in a position con n is conscious, give	
Oatey Clear Cutting Oil				SDS US

Most important symptoms/effects, acute and delayed	personnel. Get medical attention if symptoms occur. Ingestion may result in nausea, vomiting, and or diarrhea.
Indication of immediate medical attention and special treatment needed.	Immediate medical attention is not required.
General information	Note to physician, treat symptomatically.
5. Fire-fighting measures	
Suitable extinguishing media	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	Do not use water in a jet.
Specific hazards arising from the chemical	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases, oxides of sulfur and phosphorous (smoke). Carbon monoxide.
Special protective equipment and precautions for firefighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Fire fighting equipment/instructions	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Use water spray to keep fire-exposed containers cool. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Specific methods	None

6. Accidental release measures

None

General fire hazards

Personal precautions, protective equipment and emergency procedures	Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Methods and materials for containment and cleaning up	Large Spills: Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal. Small Spills: Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 of SDS for emergency contactiners from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
7. Handling and storage	
Precautions for safe handling	Use local exhaust ventilation if there is risk of inhalation of vapors, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials to prevent fires. Put on appropriate personal protective equipment (see section 8 of SDS). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10 of SDS) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
8. Exposure controls/perso	onal protection

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

US. ACGIH Threshold Liff	lit values		
Components		Туре	Value
Oil Mist, Mineral		TLV or PEL	5 mg/m3
US OSHA Permissible Ex	oosure Limits		
Components		Туре	Value
Biological limit values	Data Not available.		
Appropriate engineering controls	No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.		
ndividual protection measures Eye/face protection	, such as personal prote Safety eyewear comp		ould be used when a risk assessme
Skin protection			
Hand		npervious gloves complying with an ng chemical products if a risk asses:	
Other	Appropriate footwear	and any additional skin protection med and the risks involved and shou	neasures should be selected based
Respiratory protection	Use a properly fitted, assessment indicates	particulate filter respirator complying this is necessary. Respirator select levels, the hazards of the product an	ion must be based on known or
Thermal hazards	None.		
General hygiene considerations	smoking and using th should be used to rer not be allowed out of	is and face thoroughly after handling e lavatory and at the end of the work nove potentially contaminated clothi the workplace. Wash contaminated I safety showers are close to the wo	king period. Appropriate techniques ng. Contaminated work clothing sho clothing before reusing. Ensure that

9. Physical and chemical properties

Liquid
Liquid
Amber
Slight hydrocarbon
Not available.
Not applicable
No data available.
Not determined
> 340 °F (> 171°C)
sive limits
Not available
Not available
Not available
Not available
Not applicable
Not applicable
0.91
Negligible
>6 based on similar products
Not applicable

Oatey Clear Cutting Oil SDS # Version #: 01 Revision date: Issue date: 12-May-2015

Decomposition temperature	Not available
Viscosity, kinematic	160 SUS at 100 F (typical)
Other information	
VOC (Weight %)	<1% by weight, < 10 g/L

10. Stability and reactivity

Reactivity	The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph	
Chemical stability	The product is stable.	
Possibility of hazardous reaction	Under normal conditions of storage and use, hazardous reactions will not occur.	
Conditions to avoid	Extreme temperature and direct sunlight.	
Incompatible materials	Strong Oxidizing Agents.	
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.	
11. Toxicological information		

Information on likely routes of e	exposure		
Inhalation	Mist from processing.		
Skin contact	Skin contact.		
Eye contact	Eye contact.		
Ingestion	No known significant effects or crit	ical hazards.	
Symptoms related to the physical, chemical and toxicological characteristics	No specific data.		
Information on likely routes of e Acute Toxicity	exposure		
Components	Species	Results	

Skin corrosion/irritation	May cause skin irritation after prolonged exposure. Prolonged exposure or repeated exposure without proper cleaning can clog pores of the skin.
Serious eye damage/eye irritation	Expected to be slightly irritating.
Respiratory or skin sensitization Respiratory sensitization	Inhalation of vapors or mists may cause irritation to the respiratory system.
Skin sensitization	This product is not expected to cause skin irritation.
Germ cell mutagenicity	Not considered a mutagenic hazard
Carcinogenicity	No component of this product is identified as a probable, possible, or confirmed carcinogen by IARC, NTP, Monographs, or OSHA.
Reproductive toxicity	No known significant effects or critical hazards.
Specific target organ toxicity	
Single exposure Repeated exposure	Not expected to be a hazard. Not expected to be a hazard.
Aspiration Hazard	Contains Distillates (petroleum), hydrotreated – Which is a category 1 Aspiration Hazard. The likely hood of aspirating the product in this form is very low due to the high viscosity.
Chronic effects	Not Classified.
Further information	Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and may present risks to health and the environment on disposal. Used oil should be handled with caution and skin contact should be avoided when possible.
40 Exclosed information	

12. Ecological information

Ecotoxicity	Descrite	0	F
Product/ingredient name	Results	Species	Exposure
Petroleum Distillates			
	Acute LC50 2,900 µg/l Fresh water	Fish - Rainbow trout, Donaldson trou	t 96 h

Persistence and degradability	Not Available.
Bio accumulative potential	Not Available.
Mobility in soil	Liquid under most conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.
Other adverse effects	No known significant effects of critical hazards.

13. Disposal considerations

Disposal instructions	The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Local disposal regulations	Not Applicable
Hazardous waste code	Not Applicable
14. Transportation information	tion
DOT .	Not Regulated
UN number	
UN Proper Shipping Name	
Transportation Hazard classes	
Packing group	
ΙΑΤΑ	Not Regulated
UN number	
UN Proper Shipping Name	
Transportation Hazard classes	
Packing group	
IMDG	Not Regulated
UN number	
UN Proper Shipping Name	
Transportation Hazard classes	
Packing group	
Environmental hazards	
Marine polluntant	
15. Regulatory information	
U.S. Federal regulations	TSCA 12(b) - Chemical export notification: None required. TSCA 5(a)2 - Final significant new use rules: Not listed TSCA 5(a)2 - Proposed significant new use rules: Not listed TSCA 5(e) - Substances consent order: Not listed
SARA 311/312	
Classification	Not applicable
US state regulations	
California Prop 65	This product does not contain a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.
Oatev Clear Cutting Oil	SDS US

16. Other information, including date of preparation or last revision

Issue Date	12-May-2015
Revision Date	-
Version #	01
HMIS Rating	Health: 1 Flammability: 1 Physical Hazards: 0
Disclaimer	Oatey Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.





SAFETY DATA SHEET

1. Identification	
Product identifier	Oatey Dark Cutting Oil
Other means of identification	
Product code	
Synonyms	Part Numbers: 30203, 30204, 30205
Recommended use	Cutting oil for high speed thread cutting machines.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/	Distributor information
Company Name	Oatey Inc.
Address	4700 West 160th Street
	Cleveland, OH 44135
Telephone	216-267-7100
E-mail	info@oatey.com
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)
Emergency First Aid	1-877-740-5015
Contact person	MSDS Coordinator
2. Hazard(s) identification	
Physical hazards	Not Classified.
Health hazards	Not Classified
OSHA defined hazards	Not Classified.
Label elements	
Hazard symbol	None.
Signal word	None
Hazard statement	This product does not require any hazard statements.
Precautionary statement	
Prevention	This product does not require any precautionary statements.
Response	This product does not require any precautionary statements.
Storage	Not applicable.
Disposal	Not applicable.
Hazard(s) not otherwise classified (HNOC)	Used Oil may contain harmful impurities.

3. Composition/information on ingredients

Mixtures

Chemical name		CAS number	%	
Petroleum Hydrocarbon Mixture		Mixture	>95	
4. First-aid measures				
Inhalation	Remove victim to fresh air and keep at a attention if symptoms occur.	rest in a position comfortable f	or breathing. Get me	dical
Skin contact	Flush contaminated skin with plenty of w medical attention if symptoms occur.	vater. Remove contaminated of	clothing and shoes. G	Get
Eye contact	Immediately flush eyes with plenty of wa Check for and remove any contact lense			s.
Ingestion	Wash out mouth with water. Remove vie for breathing. If material has been swall quantities of water to drink. Do not induc	ctim to fresh air and keep at re owed and the exposed persor	est in a position comfo is conscious, give si	
Oatey Dark Cutting Oil			5	SDS US

Most important symptoms/effects, acute and delayed	personnel. Get medical attention if symptoms occur. Ingestion may result in nausea, vomiting, and or diarrhea.
Indication of immediate medical attention and special treatment needed.	Immediate medical attention is not required.
General information	Note to physician, treat symptomatically.
5. Fire-fighting measures	
Suitable extinguishing media	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	Do not use water in a jet.
Specific hazards arising from the chemical	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases, oxides of sulfur and phosphorous (smoke). Carbon monoxide.
Special protective equipment and precautions for firefighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Fire fighting equipment/instructions	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Use water spray to keep fire-exposed containers cool. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Specific methods	None

6. Accidental release measures

None

General fire hazards

Personal precautions, protective equipment and emergency procedures	Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Methods and materials for containment and cleaning up	Large Spills: Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal. Small Spills: Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container, lispose of via a licensed waste disposal contractor. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal contractor. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal contractor. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
7. Handling and storage	
Precautions for safe handling	Use local exhaust ventilation if there is risk of inhalation of vapors, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials to prevent fires. Put on appropriate personal protective equipment (see section 8 of SDS). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10 of SDS) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
8 Exposure controls/persor	

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components		Туре	Value
Oil Mist, Mineral		TLV or PEL	5 mg/m3
US OSHA Permissible Ex	posure Limits		
Components		Туре	Value
Biological limit values	Data Not available.		
Appropriate engineering controls	No special ventilation worker exposure to a limits, use process er	requirements. Good general ventilat irborne contaminants. If this product iclosures, local exhaust ventilation of w any recommended or statutory lim	contains ingredients with exposure other engineering controls to keep
ndividual protection measures Eye/face protection	, such as personal prote Safety eyewear comp		ould be used when a risk assessme
Skin protection			
Hand		npervious gloves complying with an a	
Other	Appropriate footwear	ng chemical products if a risk assess and any additional skin protection m ned and the risks involved and shoul	easures should be selected based
Respiratory protection	Use a properly fitted,	particulate filter respirator complying this is necessary. Respirator selecti	with an approved standard if a risk
	selected respirator.	levels, the hazards of the product ar	
Thermal hazards General hygiene	selected respirator. None.		d the safe working limits of the

Liquid
Liquid
Dark, brown
Slight hydrocarbon
Not available.
Not applicable
No data available.
Not determined
> 340 °F (> 171°C)
sive limits
Not available
Not available
Not available
Not available
Not applicable
Not applicable
0.92
Negligible
>6 based on similar products
Not applicable

Oatey Dark Cutting Oil SDS # Version #: 01 Revision date: Issue date: 12-May-2015

Decomposition temperature	Not available
Viscosity, kinematic	182 SUS at 100 F (typical)
Other information	
VOC (Weight %)	< 1% by weight, < 10 g/L

10. Stability and reactivity

Reactivity	The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph
Chemical stability	The product is stable.
Possibility of hazardous reaction	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Extreme temperature and direct sunlight.
Incompatible materials	Strong Oxidizing Agents.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
11. Toxicological informat	ion

Information on likely routes of e	exposure		
Inhalation	Mist from processing.		
Skin contact	Skin contact.		
Eye contact	Eye contact.		
Ingestion	No known significant effects or cr	itical hazards.	
Symptoms related to the physical, chemical and toxicological characteristics	No specific data.		
Information on likely routes of e Acute Toxicity	exposure		
Components	Species	Results	

Skin corrosion/irritation Serious eye damage/eye irritation	May cause skin irritation after prolonged exposure. Prolonged exposure or repeated exposure without proper cleaning can clog pores of the skin. Expected to be slightly irritating.
Respiratory or skin sensitization Respiratory sensitization	Inhalation of vapors or mists may cause irritation to the respiratory system.
Skin sensitization	This product is not expected to cause skin irritation.
Germ cell mutagenicity	Not considered a mutagenic hazard
Carcinogenicity	No component of this product is identified as a probable, possible, or confirmed carcinogen by IARC, NTP, Monographs, or OSHA.
Reproductive toxicity	No known significant effects or critical hazards.
Specific target organ toxicity	
Single exposure Repeated exposure	Not expected to be a hazard. Not expected to be a hazard.
Aspiration Hazard	Contains Distillates (petroleum), hydrotreated – Which is a category 1 Aspiration Hazard. The likely hood of aspirating the product in this form is very low due to the high viscosity.
Chronic effects	Not Classified.
Further information	Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and may present risks to health and the environment on disposal. Used oil should be handled with caution and skin contact should be avoided when possible.

12. Ecological information

Product/ingredient name	Results	Species	Exposure
Petroleum Distillates			
	Acute LC50 2,900 µg/l Fresh water	Fish - Rainbow trout, Donaldson trout	t 96 h

Persistence and degradability	Not Available.
Bio accumulative potential	Not Available.
Mobility in soil	Liquid under most conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.
Other adverse effects	No known significant effects of critical hazards.

13. Disposal considerations

Disposal instructions	The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Local disposal regulations	Not Applicable
Hazardous waste code	Not Applicable
14. Transportation information	tion
DOT	Not Regulated
UN number	
UN Proper Shipping Name	
Transportation Hazard classes	
Packing group	
ΙΑΤΑ	Not Regulated
UN number	
UN Proper Shipping Name	
Transportation Hazard classes	
Packing group	
IMDG	Not Regulated
UN number	
UN Proper Shipping Name	
Transportation Hazard classes	
Packing group	
Environmental hazards	
Marine polluntant	
15. Regulatory information	
U.S. Federal regulations	TSCA 12(b) - Chemical export notification: None required. TSCA 5(a)2 - Final significant new use rules: Not listed TSCA 5(a)2 - Proposed significant new use rules: Not listed TSCA 5(e) - Substances consent order: Not listed
SARA 311/312	
Classification	Not applicable
US state regulations	
California Prop 65	This product does not contain a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.
Oatev Dark Cutting Oil	SDS US

16. Other information, including date of preparation or last revision

Issue Date	12-May-2015
Revision Date	-
Version #	01
HMIS Rating	Health: 1 Flammability: 1 Physical Hazards: 0
Disclaimer	Oatey Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Solvents & Section E

Contents:

1. Cement

2. PVC Primer

3. CPVC Cement





SAFETY DATA SHEET

1. Identification

1. Identification			
Product identifier	HERCULES CLEAR, PURPLE, AND UNPUR	PLE PRIMER	
Other means of identification			
SDS number	7402E		
Synonyms	Part Numbers: Clear - 60453, 60458, 60460, 60465, 60470, Purple - 60403, 60413, 60415, 60420, 60425 Un-Purple - 60445, 60447		
Recommended use	Joining PVC Pipes		
Recommended restrictions	None known.		
Manufacturer/Importer/Supplier	/Distributor information		
Company Name Address	HCC Holdings, Inc. an Oatey Affiliate 4700 West 160th Street Cleveland, OH 44135		
Telephone	216-267-7100		
E-mail	info@oatey.com		
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-	703-527-3887)	
Emergency First Aid Contact person	1-877-740-5015 MSDS Coordinator		
Contact person			
2. Hazard(s) identification			
Physical hazards	Flammable liquids	Category 2	
Health hazards	Acute toxicity, oral	Category 4	
	Skin corrosion/irritation	Category 2	
	Serious eye damage/eye irritation	Category 2A	
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation	
	Specific target organ toxicity, single exposure	Category 3 narcotic effects	
	Aspiration hazard	Category 1	
OSHA defined hazards	Not classified.		
Label elements			
Signal word	Danger		
Hazard statement		swallowed. May be fatal if swallowed and enters s eye irritation. May cause respiratory irritation. May	
Precautionary statement			
Prevention	Keep away from heat/sparks/open flames/hot surfaces No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.		
Response	If swallowed: Immediately call a poison center contaminated clothing. Rinse skin with water/s keep comfortable for breathing. If in eyes: Rins	/doctor. If on skin (or hair): Take off immediately all shower. If inhaled: Remove person to fresh air and se cautiously with water for several minutes.	

keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.

Storage

Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

Supplemental information

Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Acetone	67-64-1	30-60
Cyclohexanone	108-94-1	15-40
Furan, Tetrahydro-	109-99-9	10-30
Methyl ethyl ketone	78-93-3	10-30

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures	
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.
5. Fire-fighting measures	
Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
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General fire hazards

Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

6. Accidental release measures

V. Accidental release mea	
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.
	Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.
	Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage	
Precautions for safe handling	Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

109-99-9)

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
		1000 ppm	
Cyclohexanone (CAS 108-94-1)	PEL	200 mg/m3	
,		50 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	PEL	590 mg/m3	
,		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	PEL	590 mg/m3	
		200 ppm	
US. ACGIH Threshold Limit Value	es		
Components	Туре	Value	
Acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
Cyclohexanone (CAS 108-94-1)	STEL	50 ppm	
-	TWA	20 ppm	
Furan, Tetrahydro- (CAS	STEL	100 ppm	

US. ACGIH Threshold Limit Values

Components	Туре	Value	
	TWA	50 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	
US. NIOSH: Pocket Guide to Che	mical Hazards		
Components	Туре	Value	
Acetone (CAS 67-64-1)	TWA	590 mg/m3	
		250 ppm	
Cyclohexanone (CAS 108-94-1)	TWA	100 mg/m3	
		25 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	735 mg/m3	
		250 ppm	
	TWA	590 mg/m3	
		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	885 mg/m3	
		300 ppm	
	TWA	590 mg/m3	
		200 ppm	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time	
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*	
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexan ediol, with hydrolysis	Urine	*	
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*	
Furan, Tetrahydro- (CAS 109-99-9)	2 mg/l	Tetrahydrofura n	Urine	*	
Methyl ethyl ketone (CAS 78-93-3)	2 mg/l	MEK	Urine	*	

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skir	designation	
Cyclohexanone (CAS 1	08-94-1)	Can be absorbed through the skin.
US - Minnesota Haz Subs	Skin designation applies	
Cyclohexanone (CAS 1	08-94-1)	Skin designation applies.
US - Tennessee OELs: Sk	in designation	
Cyclohexanone (CAS 1	08-94-1)	Can be absorbed through the skin.
US ACGIH Threshold Lim	t Values: Skin designation	
Cyclohexanone (CAS 1	08-94-1)	Can be absorbed through the skin.
Furan, Tetrahydro- (CAS 109-99-9)		Can be absorbed through the skin.
US. NIOSH: Pocket Guide	to Chemical Hazards	
Cyclohexanone (CAS 1	08-94-1)	Can be absorbed through the skin.
Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Good g changes per hour) should be used. Ventilation rates should be applicable use process enclosures local exhaust ventilation		e used. Ventilation rates should be matched

entilation (typically 10 air ed to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Face shield is recommended. Wear safety glasses with side shields (or goggles).

Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Translucent.
Physical state	Liquid.
Form	Liquid.
Color	Clear. or Purple
Odor	Solvent.
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	151 °F (66.11 °C)
Flash point	14.0 - 23.0 °F (-10.05.0 °C)
Evaporation rate	5.5 - 8
Flammability (solid, gas)	Not available.
Upper/lower flammability or exp	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	145 mm Hg @ 20 C
Vapor density	2.5
Relative density	0.82 - 0.86
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	< 100 cP
Other information	
Bulk density	7 lb/gal
VOC (Weight %)	505 g/I SQACMD Method 304
10. Stability and reactivity	

ReactivityThe product is stable and non-reactive under normal conditions of use, storage and transport.Chemical stabilityMaterial is stable under normal conditions.Possibility of hazardous
reactionsNo dangerous reaction known under conditions of normal use.Conditions to avoidAvoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the
flash point. Contact with incompatible materials.Incompatible materialsAcids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Information on toxicological effects

Acute toxicity

May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.

Components	Species	Test Results
Acetone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	20 ml/kg
Inhalation		
LC50	Rat	50 mg/l, 8 Hours
Oral		
LD50	Rat	5800 mg/kg
cyclohexanone (CAS 108-94-1)	
Acute		
Dermal		0.40 //
LD50	Rabbit	948 mg/kg
Inhalation		
LC50	Rat	8000 ppm, 4 hours
Oral	Det	
LD50	Rat	1540 mg/kg
* Estimates for product ma	y be based on additional component data	a not shown.
kin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye rritation	Causes serious eye irritation.	
Respiratory or skin sensitizat	tion	
Respiratory sensitization	Not available.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.	

Cyclohexanone (CAS 108-94-1)

3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulate Not listed.	d Substances (29 CFR 1910.1001-1050)
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Narcotic effects. May cause drowsiness and dizziness. Respiratory tract irritation.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecoto	xicitv
LOOID	Aloity.

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Acetone (CAS 67-64-	1)		
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
Cyclohexanone (CAS	108-94-1)		
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	481 - 578 mg/l, 96 hours

* Estimates for product ma	ay be based on additional compo	onent data not shown.
Persistence and degradabilit	y No data is available on the	degradability of this product.
Bioaccumulative potential	No data available.	
Partition coefficient n-oc	tanol / water (log Kow)	
Acetone (CAS 67-64-1)		-0.24
Cyclohexanone (CAS 108-94-1)		0.81
Furan, Tetrahydro- (CAS 109-99-9)		0.46
Methyl ethyl ketone (CAS	78-93-3)	0.29
Mobility in soil	No data available.	
Other adverse effects		nental effects (e.g. ozone depletion, photochemical ozone creation tion, global warming potential) are expected from this component.
13. Disposal considera	tions	
Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international	

	regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT	
UN number	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (Methyl ethyl ketone RQ = 25063 LBS, Acetone RQ = 12522 LBS)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	II

Special precautions for user Special provisions Packaging exceptions Packaging non bulk Packaging bulk IATA	Read safety instructions, SDS and emergency procedures before handling. IB2, T7, TP1, TP8, TP28 150 202 242
UN number	UN1993
UN proper shipping name	Flammable liquid, n.o.s. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	3H
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
IMDG	
UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Methyl ethyl ketone, Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	I
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-E
Special precautions for user Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Read safety instructions, SDS and emergency procedures before handling. Not available.
15. Regulatory information	1
US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1)	LISTED
Cyclohexanone (CAS 108-94-1)	LISTED
Furan, Tetrahydro- (CAS 109-99-9)	LISTED
Methyl ethyl ketone (CAS 78-93-3)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories Immediate Hazard - Yes

Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous No chemical

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations			
Clean Air Act (CAA) Section	n 112 Hazardous Air Polluta	nts (HAPs) List	
Not regulated. Clean Air Act (CAA) Sectior	n 112(r) Accidental Release	Prevention (40 CFR 68.130)	
Not regulated. Safe Drinking Water Act (SDWA)	Not regulated.		
		sential Chemicals (21 CFR 1310.02(b) a	and 1310.04(f)(2) and
Acetone (CAS 67-64 Methyl ethyl ketone	(CAS 78-93-3)	6532 6714 Exempt Chemical Mixtures (21 CFR 13	210 12(~))
		35 %WV	310.12(0))
Acetone (CAS 67-64 Methyl ethyl ketone DEA Exempt Chemical		35 %WV 35 %WV	
Acetone (CAS 67-64	,	6532 6714	
Methyl ethyl ketone US state regulations	(CAS 70-93-3)	6714	
US. Massachusetts RTK - S	ubstance List		
Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS	8-94-1) 109-99-9)		
US. New Jersey Worker and	d Community Right-to-Know	Act	
Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS	109-99-9)		
US. Pennsylvania Worker a		ow Law	
Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS US. Rhode Island RTK	109-99-9)		
Acetone (CAS 67-64-1) Cyclohexanone (CAS 10 Furan, Tetrahydro- (CAS Methyl ethyl ketone (CAS	109-99-9)		
		Act of 1986 (Proposition 65): This materi ductive toxins.	ial is not known to contain
International Inventories			
Country(s) or region	Inventory name		On inventory (yes/no)*
Australia	Australian Inventory of Che	mical Substances (AICS)	Yes
Canada	Domestic Substances List (Yes
Canada	Non-Domestic Substances		No
China		ical Substances in China (IECSC)	Yes
Europe -	European Inventory of Exis Substances (EINECS)		Yes
Europe	-	hemical Substances (ELINCS)	No
Japan		ew Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (EC	<i>،</i> L)	Yes
New Zealand Philippines	New Zealand Inventory Philippine Inventory of Che (PICCS)	micals and Chemical Substances	Yes Yes

Country(s) or region

Inventory name

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	17-December-2014
Revision date	-
Version #	01
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available. HCC Holdings Inc. an Oatey Affiliate cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.





* * * Section 1 - Product and Company Identification * * *

MSDS #96

Part Numbers: 60703, 60713, 60715, 60720, 60725

Manufacturer Information

HCC Holdings, Inc. An Oatey Affiliate 4700 West 160th Street Cleveland, OH 44135 Phone: 216-267-7100

For Emergency First Aid call 1-877-740-5015. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.

* * * Section 2 - Hazards Identification * * *

GHS Classification:

Flammable Liquids - Category 2 Acute Toxicity Oral - Category 4 Acute Toxicity Dermal - Category 4 Acute Toxicity Inhalation - Category 4 Eye Damage/Irritation - Category 2A Carcinogenicity - Category 2 Specific Target Organ Toxicity Single Exposure - Category 3

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapor.

Harmful if swallowed.

Harmful in contact with skin.

Harmful if inhaled.

Causes serious eye irritation.

Contains a chemical classified by the US EPA as a suspected possible carcinogen.

May cause respiratory irritation.

May cause drowsiness or dizziness.

Precautionary Statements

Prevention

Keep away from heat/sparks/open flames and hot surfaces. - No smoking. Keep container tightly closed.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Wear protective gloves/eye protection/face protection.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Avoid breathing fume/gas/mist/vapors.

Use only outdoors or in a well-ventilated area.

Response

If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

If swallowed: Call a poison center or doctor/physician if you feel unwell. Rinse mouth. Do not induce vomiting. If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

If exposed or concerned: Get medical advice/attention.

In case of fire: Use dry chemical, CO2, or foam to extinguish fire.

Storage

Store in a well-ventilated place. Keep cool. Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

*** Section 3 - Composition / Information on Ingredients **

CAS #	Component	Percent
109-99-9	Tetrahydrofuran	30-40
78-93-3	Methyl ethyl ketone	20-30
68648-82-8	Ethene, chloro-, homopolymer, chlorinated	10-15
108-94-1	Cyclohexanone	10-15
67-64-1	Acetone	5-15

*** Section 4 - First Aid Measures ***

First Aid: Eyes

If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.

First Aid: Skin

Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with hand cleaner or baby oil.

First Aid: Ingestion

DO NOT INDUCE VOMITING. Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

First Aid: Inhalation

If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

*** Section 5 - Fire Fighting Measures ***

General Fire Hazards

See Section 9 for Flammability Properties.

Highly flammable liquid and vapor. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

Hazardous Combustion Products

Carbon Dioxide and Carbon Monoxide are formed. Irritating peroxide fumes formed when heated to decomposition.

Extinguishing Media

Use dry chemical, CO2, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.

Unsuitable Extinguishing Media

None.

Fire Fighting Equipment/Instructions

Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

*** Section 6 - Accidental Release Measures ***

Recovery and Neutralization

Stop leak if it can be done without risk.

Materials and Methods for Clean-Up

Remove all sources of ignition and ventilate area. Soak up spill with an inert absorbent such as sand, earth or other noncombusting material. Put absorbent material in covered, labeled metal containers.

Emergency Measures

Isolate area. Keep unnecessary personnel away.

Personal Precautions and Protective Equipment

Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high.

Environmental Precautions

Prevent liquid from entering watercourses, sewers and natural waterways.

Prevention of Secondary Hazards

None

* * * Section 7 - Handling and Storage * *

Handling Procedures

Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use. "Empty" containers retain product residue and can be hazardous. Follow all SDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

Storage Procedures

Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.

Incompatibilities

Strong oxidizing materials, Lithium Aluminum Hydride, Sodium Aluminum Hydroxide & Sodium & Potassium Hydroxides.

*** Section 8 - Exposure Controls / Personal Protection ***

Component Exposure Limits

Tetrahydrofuran (109-99-9)

-	. ,
ACGIH:	50 ppm TWA
	100 ppm STEL
	Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA:	200 ppm TWA; 590 mg/m3 TWA
NIOSH:	200 ppm TWA; 590 mg/m3 TWA
	250 ppm STEL; 735 mg/m3 STEL

Methyl ethyl ketone (78-93-3)

ACGIH:	200 ppm TWA
	300 ppm STEL
OSHA:	200 ppm TWA; 590 mg/m3 TWA
NIOSH:	200 ppm TWA; 590 mg/m3 TWA
	300 ppm STEL; 885 mg/m3 STEL

Cyclohexanone (108-94-1)

 ACGIH: 20 ppm TWA 50 ppm STEL Skin - potential significant contribution to overall exposure by the cutaneous route
 OSHA: 50 ppm TWA; 200 mg/m3 TWA
 NIOSH: 25 ppm TWA; 100 mg/m3 TWA

Potential for dermal absorption

CPVC (Chloroethylene, polymer) (68648-82-8)

ACGIH: 1 mg/m3 TWA (respirable fraction)

Acetone (67-64-1)

 ACGIH:
 500 ppm TWA

 750 ppm STEL

 OSHA:
 1000 ppm TWA; 2400 mg/m3 TWA

 NIOSH:
 250 ppm TWA; 590 mg/m3 TWA

Engineering Measures

Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.

Personal Protective Equipment: Respiratory

For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

Personal Protective Equipment: Hands

Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.

Personal Protective Equipment: Eyes

Safety glasses with side shields or safety goggles.

Personal Protective Equipment: Skin and Body

No additional protective equipment needed.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance: Physical State:	,	Odor: Ha:	Acetone-like NA
	400 @ 104º F (Based on Acetone)	Vapor Density:	
Boiling Point:	133°F (Based on Acetone)	Melting Point:	NA
Solubility (H2O):	60-85%	Specific Gravity:	0.923 +/- 0.03
Evaporation Rate:	7-11	VOC:	490 g/L
Octanol/H2O Coeff.:	ND	Flash Point:	6°F
Flash Point Method:	TCC	Upper Flammability Limit (UFL):	11.8
Lower Flammability Limit (LFL):	2.0	Burning Rate:	ND
Auto Ignition:	ND		

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Avoid heat, sparks, flames and other sources of ignition.

Incompatible Products

Strong oxidizing materials, Lithium Aluminum Hydride, Sodium Aluminum Hydroxide & Sodium & Potassium Hydroxides.

Hazardous Decomposition Products

Carbon Dioxide and Carbon Monoxide are formed. Irritating peroxide fumes formed when heated to decomposition.

*** Section 11 - Toxicological Information **

Acute Toxicity

Component Analysis - LD50/LC50

Tetrahydrofuran (109-99-9)

Inhalation LC50 Rat 53.9 mg/L 4 h; Inhalation LC50 Rat 180 mg/L 1 h; Oral LD50 Rat 1650 mg/kg

Methyl ethyl ketone (78-93-3)

Inhalation LC50 Mouse 32 g/m3 4 h; Oral LD50 Rat 2737 mg/kg; Dermal LD50 Rabbit 6480 mg/kg

Cyclohexanone (108-94-1)

Inhalation LC50 Rat 10.7 mg/L 4 h; Inhalation LC50 Rat 8000 ppm 4 h; Oral LD50 Rat 800 mg/kg; Dermal LD50 Rabbit 948 mg/kg

Acetone (67-64-1)

Oral LD50 Rat 5800 mg/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.

Potential Health Effects: Ingestion

Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

Potential Health Effects: Inhalation

Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

Cyclohexanone has been positive in bacterial and mammalian assays. Acetone, methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.

Carcinogenicity

A: General Product Information

In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.

B: Component Carcinogenicity

Tetrahydrofuran (109-99-9)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Cyclohexanone (108-94-1)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Ethene, chloro-, homopolymer, chlorinated (68648-82-8)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Supplement 7 [1987]; Monograph 19 [1979] (Group 3 (not classifiable))

Acetone (67-64-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

Reproductive Toxicity

Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.

Specified Target Organ General Toxicity: Single Exposure

May cause respiratory irritation. Inhalation of high concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ toxicity repeat exposure effects.

Aspiration Respiratory Organs Hazard

Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

*** Section 12 - Ecological Information ***

Ecotoxicity

A: General Product Information

This product is not expected to be toxic to aquatic organisms.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Tetrahydrofuran (109-99-9)		
Test & Species		Conditions
96 Hr LC50 Pimephales promelas	1970-2360 mg/L [flow-through]	
96 Hr LC50 Pimephales promelas	2700-3600 mg/L [static]	
24 Hr EC50 Daphnia magna	5930 mg/L	
Mathyl athyl katana (79.02.2)		
Methyl ethyl ketone (78-93-3)		
Test & Species		Conditions
	3130-3320 mg/L [flow-through]	Conditions
Test & Species	0	Conditions
Test & Species 96 Hr LC50 Pimephales promelas	[flow-through]	Conditions
Test & Species 96 Hr LC50 Pimephales promelas 48 Hr EC50 Daphnia magna	[flow-through] >520 mg/L	Conditions

Cyclohexanone (108-94-1) Test & Species		Conditions
96 Hr LC50 Pimephales promelas	481-578 mg/L [flow- through]	
96 Hr LC50 Pimephales promelas	8.9 mg/L	
96 Hr EC50 Chlorella vulgaris	20 mg/L	
24 Hr EC50 Daphnia magna	800 mg/L	
Acetone (67-64-1) Test & Species		Conditions
96 Hr LC50 Oncorhynchus mykiss	4.74 - 6.33 mL/L	
96 Hr LC50 Pimephales promelas	6210 - 8120 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	8300 mg/L	
48 Hr EC50 Daphnia magna		
	10294 - 17704 mg/L [Static]	

Persistence/Degradability

No information available for the product.

Bioaccumulation

No information available for the product.

Mobility in Soil

No information available for the product.

* * * Section 13 - Disposal Considerations * * *

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 14 - Transportation Information

DOT Information

For Greater than 1 liter (0.3 gal):

* * *

Shipping Name: Flammable Liquid, n.o.s (Tetrahydrofuran, Methyl Ethyl Ketone) UN #: 1993 Hazard Class: 3 Packing Group: II Required Label(s): Flammable Liquid

For Less than 1 liter (0.3 gal): Shipping Name: Consumer Commodity, ORM-D

IMDG Information

For Greater than 1 liter (0.3 gal): Shipping Name: Flammable Liquid, n.o.s (Tetrahydrofuran, Methyl Ethyl Ketone) UN #: 1993 Hazard Class: 3 Packing Group: II Required Label(s): Flammable Liquid

For Less than 1 liter (0.3 gal): Shipping Name: Flammable Liquid, n.o.s (Tetrahydrofuran, Methyl Ethyl Ketone) UN #: 1993 Hazard Class: 3 Packing Group: II Required Label(s): None (Limited Quantities are expected from labeling)

* * * Section 15 - Regulatory Information * * *

Regulatory Information US Federal Regulations

Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Tetrahydrofuran (109-99-9)

CERCLA: 1000 lb final RQ; 454 kg final RQ

Methyl ethyl ketone (78-93-3)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Cyclohexanone (108-94-1)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Acetone (67-64-1)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Tetrahydrofuran	109-99-9	Yes	Yes	Yes	Yes	Yes	No
Methyl ethyl ketone	78-93-3	Yes	Yes	Yes	Yes	Yes	No
Cyclohexanone	108-94-1	Yes	Yes	Yes	Yes	Yes	No
Ethene, chloro-, homopolymer, chlorinated	68648-82-8	No	No	No	Yes	No	No
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes	No

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Tetrahydrofuran	109-99-9	1 %
Methyl ethyl ketone	78-93-3	1 %
Cyclohexanone	108-94-1	0.1 %
Acetone	67-64-1	1 %

Additional Regulatory Information

A: General Product Information

This product contains trace amounts of chemicals known to the State of California to cause cancer. Under normal use conditions, exposure to these chemicals at levels above the State of California "No Significant Risk Level" (NSRL) are unlikely. The use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 8 will minimize exposure to these chemicals.

B: Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Tetrahydrofuran	109-99-9	Yes	DSL	EINECS
Methyl ethyl ketone	78-93-3	Yes	DSL	EINECS
Cyclohexanone	108-94-1	Yes	DSL	EINECS
Ethene, chloro-, homopolymer, chlorinated	68648-82-8	Yes	DSL	ELINCS
Acetone	67-64-1	Yes	DSL	EINECS

* * * Section 16 - Other Information * * *

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

Literature References

None

Other Information

NFPA and HMIS:

NFPA Hazard Signal: Health: 2 Flammability: 3 Reactivity: 1 Special: None HMIS Hazard Signal: Health: 2* Flammability: 3 Reactivity: 1 PPE: G

Disclaimer:

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, we cannot give any guarantees regarding information from other sources, and expressly do not make warranties, nor assume any liability for its use.

End of Sheet

Putty, Solder, Flux

Section F

Contents:

1. LEAD FREE SOLDER 2. NO#5 PASTE 3. FLUX 4. PLUMBER PUTTY





SAFETY DATA SHEET

1. Identification

Product identifier	Oatey 95/5 Lead Free Solder (Plumbing, Acid or Rosin Core)	
Other means of identification		
SDS number	1600E	
Synonyms	Part Numbers: 22004, 22018, 22025, 22017, 53026, 53181, 53027, 53189, 53171, 53173, 53175, 53177, 53190, 29031, 53170, 53172, 53174, 53176	
Recommended use	Joining Copper Pipes. Joining Copper Tubing.	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Company Name	Oatey Co.	
Address	4700 West 160th St.	
	Cleveland, OH 44135	
Telephone	216-267-7100	
E-mail	info@oatey.com	
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)	
Emergency First Aid	1-877-740-5015	
Contact person	MSDS Coordinator	

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Not classified.	
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 3
OSHA defined hazards	Not classified.	
Label elements		
Hazard symbol	None.	
Signal word	None.	
Hazard statement	Harmful to aquatic life with long lasting effects.	
Precautionary statement		
Prevention	Avoid release to the environment.	
Response	Wash hands after handling.	
Storage	Store away from incompatible materials.	
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.	
Hazard(s) not otherwise classified (HNOC)	None known.	

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Tin	7440-31-5	60-100
Antimony	7440-36-0	3-7

4. First-aid measures

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.

Most important symptoms/effects, acute and delayed Indication of immediate medical attention and special treatment needed General information

Provide general supportive measures and treat symptomatically.

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Dry sand. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Stop the flow of material, if this is without risk. Dike far ahead of spill for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.
7. Handling and storage	
Precautions for safe handling	Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices. Use care in handling/storage.
Conditions for sofe storage	Store in original tightly closed container. Store away from incompatible materials (see Section 10

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	
Antimony (CAS 7440-36-0)	PEL	0.5 mg/m3	
Tin (CAS 7440-31-5)	PEL	2 mg/m3	
US. ACGIH Threshold Limit Value	5		
Components	Туре	Value	
Antimony (CAS 7440-36-0)	TWA	0.5 mg/m3	
Tin (CAS 7440-31-5)	TWA	2 mg/m3	
US. NIOSH: Pocket Guide to Chen	nical Hazards		
Components	Туре	Value	
Antimony (CAS 7440-36-0)	TWA	0.5 mg/m3	
Tin (CAS 7440-31-5)	TWA	2 mg/m3	

Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Individual protection measures	such as personal protective equipment
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear suitable protective clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Solid.
Form	Solid. Wire.
Color	Silver.
Odor	None.
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	450 - 464 °F (232.22 - 240 °C)
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or exp	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	9 - 11
Solubility(ies)	
Solubility (water)	Not soluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information VOC (Weight %)	0
10. Stability and reactivity	,

Reactivity

Chemical stability

The product is stable and non-reactive under normal conditions of use, storage and transport. Material is stable under normal conditions.

Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Chlorine.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Information on toxicological effects

information on toxicological ene	
Acute toxicity	Not available.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
OSHA Specifically Regulated	d Substances (29 CFR 1910.1001-1050)
Not listed.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not available.
Chronic effects	Prolonged inhalation may be harmful.
12. Ecological information	
Ecotoxicity	Harmful to aquatic life with long lasting effects.
Persistence and degradability	No data is available on the degradability of this product.

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Not applicable. Annex II of MARPOL 73/78 and the IBC Code

15. Regulatory information

US federal regulations	This product is a "Hazardou Standard, 29 CFR 1910.120 All components are on the I	00.	ed by the OSHA Hazard Communicat	ion
TSCA Section 12(b) Export	Notification (40 CFR 707, Su	ıbpt. D)		
Not regulated.				
OSHA Specifically Regulate Not listed.	ed Substances (29 CFR 1910	.1001-1050)		
CERCLA Hazardous Subst	ance List (40 CFR 302.4)			
Antimony (CAS 7440-36		LISTED		
Superfund Amendments and R	•	SARA)		
Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No	,		
SARA 302 Extremely hazar Not listed.	dous substance			
SARA 311/312 Hazardous chemical	No			
SARA 313 (TRI reporting) Chemical name		CAS number	% by wt.	
Antimony		7440-36-0	3-7	
-				
Other federal regulations				
Clean Air Act (CAA) Sectio Antimony (CAS 7440-36 Clean Air Act (CAA) Sectio	n 112 Hazardous Air Pollutai -0) n 112(r) Accidental Release I	. ,	68.130)	
Clean Air Act (CAA) Section Antimony (CAS 7440-36 Clean Air Act (CAA) Section Not regulated.	-0) n 112(r) Accidental Release	. ,	68.130)	
Clean Air Act (CAA) Sectio Antimony (CAS 7440-36 Clean Air Act (CAA) Sectio	-0)	. ,	68.130)	
Clean Air Act (CAA) Section Antimony (CAS 7440-36 Clean Air Act (CAA) Section Not regulated. Safe Drinking Water Act	-0) n 112(r) Accidental Release	. ,	68.130)	
Clean Air Act (CAA) Section Antimony (CAS 7440-36 Clean Air Act (CAA) Section Not regulated. Safe Drinking Water Act (SDWA)	-0) n 112(r) Accidental Release I Not regulated.	. ,	68.130)	
Clean Air Act (CAA) Section Antimony (CAS 7440-36 Clean Air Act (CAA) Section Not regulated. Safe Drinking Water Act (SDWA) US state regulations	-0) n 112(r) Accidental Release I Not regulated. Substance List	. ,	68.130)	
Clean Air Act (CAA) Section Antimony (CAS 7440-36 Clean Air Act (CAA) Section Not regulated. Safe Drinking Water Act (SDWA) US state regulations US. Massachusetts RTK - S Antimony (CAS 7440-36 Tin (CAS 7440-31-5)	-0) n 112(r) Accidental Release I Not regulated. Substance List	Prevention (40 CFR	68.130)	
Clean Air Act (CAA) Section Antimony (CAS 7440-36 Clean Air Act (CAA) Section Not regulated. Safe Drinking Water Act (SDWA) US state regulations US. Massachusetts RTK - S Antimony (CAS 7440-36 Tin (CAS 7440-31-5)	-0) n 112(r) Accidental Release I Not regulated. Substance List -0) d Community Right-to-Know	Prevention (40 CFR	68.130)	
Clean Air Act (CAA) Section Antimony (CAS 7440-36 Clean Air Act (CAA) Section Not regulated. Safe Drinking Water Act (SDWA) US state regulations US. Massachusetts RTK - S Antimony (CAS 7440-36 Tin (CAS 7440-31-5) US. New Jersey Worker and Antimony (CAS 7440-31-5)	-0) n 112(r) Accidental Release I Not regulated. Substance List -0) d Community Right-to-Know	Prevention (40 CFR	68.130)	
Clean Air Act (CAA) Section Antimony (CAS 7440-36 Clean Air Act (CAA) Section Not regulated. Safe Drinking Water Act (SDWA) US state regulations US. Massachusetts RTK - S Antimony (CAS 7440-36 Tin (CAS 7440-31-5) US. New Jersey Worker and Antimony (CAS 7440-31-5)	-0) n 112(r) Accidental Release I Not regulated. Gubstance List -0) d Community Right-to-Know -0) and Community Right-to-Know	Prevention (40 CFR	68.130)	
Clean Air Act (CAA) Section Antimony (CAS 7440-36 Clean Air Act (CAA) Section Not regulated. Safe Drinking Water Act (SDWA) US state regulations US. Massachusetts RTK - S Antimony (CAS 7440-36 Tin (CAS 7440-31-5) US. New Jersey Worker and Antimony (CAS 7440-31-5) US. Pennsylvania Worker a Antimony (CAS 7440-36	-0) n 112(r) Accidental Release I Not regulated. Gubstance List -0) d Community Right-to-Know -0) and Community Right-to-Know	Prevention (40 CFR	68.130)	

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

Toxic Substances Control Act (TSCA) Inventory United States & Puerto Rico

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	17-December-2014
Revision date	-
Version #	01
HMIS® ratings	Health: 0 Flammability: 0 Physical hazard: 0
Disclaimer	Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.



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MATERIAL SAFETY DATA SHEET

SECTION 1	PRODUCT AND COMPANY IDENTIFICATION
Trade Name:	OATEY #5 HOT WEATHER FLUX
Product Use:	Flux for soldering.
Formula:	See Section 2
Synonyms:	Flux for Soldering Copper Pipe
Firm Name &	OATEY CO. 4700 West 160th Street P.O. Box 35906 Cleveland,
Mailing Address:	Ohio 44135, U.S.A. http://www.oatey.com
Oatey Phone Number:	(216) 267-7100 or (800) 321-9532
Emergency Phone	For Emergency First Aid call 1-303-623-5716 COLLECT. For
Numbers:	chemical transportation emergencies ONLY, call Chemtrec at
	1-800-424-9300. Outside the U.S. 1-703-527-3887.
Prepared By:	Corporate Director - Safety and Environmental Compliance
Preparation Date:	November 3, 2006

SECTION 2	COMPOSITION/I	NFORMATION ON	INGREDIENTS	
INGREDIENTS:	% wt/wt:	CAS NUMBER:	ACGIH TLV TWA:	OSHA PEL TWA:
Petrolatum	75 - 85%	8009-03-8	5 mg/m3	5 mg/m3
			(oil mist)	(oil mist)
Zinc Chloride	10 - 15%	7646-85-7	1 mg/m3(fume)	1 mg/m3(fume)
			2 mg/m3 STEL	
Ammonium Chloride	1 - 5%	12125-02-9	10 mg/m3 (fume)	None
			20 mg/m3 STEL	Established

SECTION 3 HAZARDS IDENTIFICATION

Emergency Overview:

Yellow paste with a slight odor. May cause burns to the eye and skin. Inhalation of fumes may cause respiratory irritation, metal fume fever, chills, nausea and vomiting. Swallowing may cause burns to the mouth or throat, vomiting, diarrhea and kidney or liver disorders. May be harmful if swallowed. Symptoms may be delayed.

OSHA Hazard Classification: Corrosive, target organ effects

SECTION 4	FIRS	ST AID

FIRST AID MEASURES

CALL 1-303-623-5716 COLLECT

Skin: Remove contaminated clothing. Wash thoroughly with soap and water. Call a physician or poison control center if irritation persists.

- Eyes: Remove contact lenses if any. Rinse eyes with water for 15 minutes. Get immediate medical attention.
- Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Keep victim quiet and warm. Call a poison control center or physician immediately.
- Ingestion: DO NOT INDUCE VOMITING. Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

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SECTION 5	FIRE FIGHTING MEASURES
Flashpoint / Method	: 540 Degrees F (282 Degrees C)
Flammability:	LEL = Not determined, UEL = Not determined
Extinguishing	Small Fires: Use dry chemical, CO2, water, or foam extinguisher
Media:	Large Fires: Evacuate area and call Fire Department immediately
Special Fire	Firefighters should wear positive pressure self-contained
Fighting	breathing apparatus and full protective clothing for fires in
Procedure:	areas where chemicals are used or stored
Unusual Fire and	None known.
Explosion	
Hazards:	
Hazardous	Hydrocarbons, hydrogen chloride, zinc fumes, ammonia, smoke,
Decomposition	carbon monoxide, carbon dioxide and nitrogen oxides.
Products:	

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill or Ventilate area. Stop leak if it can be done without risk. Personnel Leak cleaning up the spill should wear appropriate personal protective Procedures: equipment. Take up spill with sand, earth or other absorbent material and place into a clean, dry leak-proof container.

SECTION 7 HANDLING AND STORAGE

 Handling: Do not get in eyes. Do not get on skin or clothing. Do not take internally. Avoid breathing vapors or fumes. Use only with adequate ventilation. Wash thoroughly after handling. Keep container closed when not in use. Handle with care. Keep out of reach of children.
 Storage: Store in original, labeled container.

Other: Containers, even empty will retain residue and may be harmful.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

- Ventilation: Good general ventilation (equivalent to outdoors) should be adequate for normal use. For operations where the TLV may be exceeded, mechanical ventilation such as local exhaust may be needed to maintain exposure levels below applicable limits.
- Respiratory For operations where the TLV may be exceeded, a NIOSH approved Protection: particulate respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus. Skin Wear rubber gloves.

Protection:	
Еуе	Safety glasses with sideshields or safety goggles.
Protection:	
Other:	Eye wash and safety shower should be available.

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SECTION 9 PI	HYSICAL AND CHEMICAL PROPERTIES
Boiling Point:	638 Degrees F (337 Degrees C)
Melting Point:	Not determined
Vapor Pressure:	Not determined
Vapor Density:	(Air = 1) Greater than 1
Volatile Components:	7-10%
Solubility In Water:	Negligible
pH:	Not applicable
Specific Gravity:	1.1
Evaporation Rate:	Not applicable
Appearance:	Yellow Paste
Odor:	Very little odor
Will Dissolve In:	Methylene Chloride
Material Is:	Paste

SECTION 10 STABILITY AND REACTIVITY Stability: Stable. Conditions To Avoid: None. Hazardous Hydrocarbons, hydrogen chloride, zinc fumes, ammonia, smoke, smoke, carbon monoxide, carbon dioxide and nitrogen oxides. Decomposition Products: Strong oxidizing agents, potassium, cyanides and sulfides. Incompatibility/ Materials To Avoid: Hazardous Will not occur. Polymerization:

SECTION 11 TOXICOLOGICAL INFORMATION Inhalation: Fumes from heated product may be corrosive to mucous membranes and the respiratory system. Fumes may cause burning sensation, coughing, wheezing, shortness of breath, cyanosis, fever, chills, muscular pain, anemia, metallic taste in the mouth, headache, nausea, vomiting, sweating, diarrhea and pulmonary edema. Fumes may cause stannosis, a mild benign pneumoconiosis. Repeated inhalation of fumes may cause occupational asthma. Symptoms may be delayed. Skin: Contact may cause irritation, ulcerations, burns or dermatitis. Symptoms may be delayed. Eye: Vapors or fumes may cause redness, pain, blurred vision and corneal damage. Direct contact may cause burns and eye damage with possible blindness. Symptoms may be delayed. Ingestion: May cause irritation or burns to the mouth and throat, nausea, vomiting or diarrhea. Death may occur from strictures of the esophagus and pylorus. Symptoms may be delayed. Toxicity Data: Petrolatum: No data available Zinc Chloride: Oral rat LD50: 350 mg/kg Ammonium Chloride: Oral rat LD50: 1,650 mg/kg Sensitization: None of the components are known to cause sensitization. Carcinogenicity: None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA. Mutagenicity: None of the components have been found to be mutagenic. Reproductive None of the components are known to cause adverse reproductive Toxicity: effects. Medical Persons with pre-existing skin, lung, kidney or liver disorders Conditions may be at increased risk from exposure to this product. Aggravated By Exposure:

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SECTION 12 ECOLOGICAL INFORMATION

No data available.

SECTION 13 DISPOSAL CONSIDERATIONS

SECTION	14	TRANSPORT	INFORMATI	ON		
DOT						
Proper	Shipping Nam	ne:	Not regu	lated		
Hazard	Class/Packir	ng Group:	None			
UN/NA 1	Jumber:		None			
Hazard	Labels:		None			
IMDG						
Proper	Shipping Nam	ne:	Not regu	lated		
Hazard	Class/Packir	ng Group:	None			
UN Numb	per:		None			
Label:			None			
2004 Noi	th American	Emergency	Response	Guidebook	Number:	None

SECTION 15 REGULATORY INFORMATION

Hazard Category for Section Acute Health, Chronic Health 311/312: Section 302 Extremely This product does not contain chemicals regulated Hazardous Substances (TPQ): under SARA Section 302. Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: Chemical CAS # % wt 7646-85-7 Zinc Chloride 10-15% Spills of this product over the RQ (reportable CERCLA 103 Reportable Quantity: quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Zinc Chloride (30% max) of 1,000 lbs, is 3,300 lbs. Chemical CAS # RQ, lbs. Zinc Chloride 7646-85-7 1,000 Ammonium Chloride 12125-02-6 5,000 Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

the TSCA inventory.

California Proposition 65:

TSCA Inventory:

Canadian WHMIS Classification:

ification: Class E; Class D, Division 2, Subdivision B This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

under California Proposition 65.

This product does not contain chemicals regulated

All of the components of this product are listed on

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SECTION 16OTHER INFORMATIONNFPA and HMIS:NFPA Hazard Signal:Health:3Flammability:1Reactivity:0PPE:B

Disclaimer:

The information herein has been compiled from sources believed to be reliable, upto-date, and is accurate to the best of our knowledge. However, Oatey cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.





SAFETY DATA SHEET

1. Identification

Product identifier	Oatey H2O 5 Paste Flux
Other means of identification	
SDS number	1613E
Synonyms	Part Numbers: 30130, 30131, 30132, 30133, 53067
Recommended use	Joining Copper Pipes. Joining Copper Tubing.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	

Company Name	Oatey Co.
Address	4700 West 160th St.
	Cleveland, OH 44135
Telephone	216-267-7100
E-mail	info@oatey.com
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)
Emergency First Aid	1-877-740-5015
Contact person	MSDS Coordinator

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1
OSHA defined hazards	Not classified.	

Label elements



	•
Signal word	Danger
Hazard statement	Causes severe skin burns and eye damage.
Precautionary statement	
Prevention	Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dusts or mists.
Response	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information Not applicable.	

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Glycerin	56-81-5	7-13

Triethanolamine Hydrochloride	637-39-8	7-13
Zinc chloride	7646-85-7	3-7
Ammonium chloride	12125-02-9	1-5

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Skin contact	Take off immediately all contaminated clothing. Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Continue rinsing. Call a physician or poison control center immediately. Remove contact lenses, if present and easy to do.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading.
	Small Spills: Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage	
Precautions for safe handling	Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Do not get this material on clothing. Provide adequate ventilation. Wear appropriate

personal protective equipment. Observe good industrial hygiene practices.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Glycerin (CAS 56-81-5)	PEL	5 mg/m3	
		5 mg/m5	Respirable fraction.
		15 mg/m3	Total dust.
Zinc chloride (CAS 7646-85-7)	PEL	1 mg/m3	Fume.
US. ACGIH Threshold Limit	t Values		
Components	Туре	Value	Form
Ammonium chloride (CAS 12125-02-9)	STEL	20 mg/m3	Fume.
	TWA	10 mg/m3	Fume.
Zinc chloride (CAS 7646-85-7)	STEL	2 mg/m3	Fume.
	TWA	1 mg/m3	Fume.
US. NIOSH: Pocket Guide to	o Chemical Hazards		
Components	Туре	Value	Form
Ammonium chloride (CAS 12125-02-9)	STEL	20 mg/m3	Fume.
	TWA	10 mg/m3	Fume.
Zinc chloride (CAS 7646-85-7)	STEL	2 mg/m3	Fume.
	TWA	1 mg/m3	Fume.
ogical limit values	No biological exposure limits noted for	the ingredient(s).	
osure guidelines	Occupational Exposure Limits are not	relevant to the current physic	al form of the product.
ropriate engineering trols	Good general ventilation (typically 10 a should be matched to conditions. If app or other engineering controls to mainta exposure limits have not been establis wash facilities and emergency shower	blicable, use process enclosu in airborne levels below reco hed, maintain airborne levels	ires, local exhaust ventilation mmended exposure limits. I to an acceptable level. Eye
-	, such as personal protective equipme		
Eye/face protection	Wear safety glasses with side shields	(or goggles) and a face shield	3.
Skin protection			
Hand protection	Wear appropriate chemical resistant gloves.		
Other	Wear appropriate chemical resistant clothing.		
Respiratory protection	In case of insufficient ventilation, wear	suitable respiratory equipme	nt.
Thermal hazards	Wear appropriate thermal protective cl	othing, when necessary.	
eral hygiene siderations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.		
Physical and chemical	properties		

Appearance	
Physical state	Liquid.
Form	Paste.
Color	Light yellow.
Odor	Slight.
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	Not available.

Initial boiling point and boiling range	Not Applicable
Flash point	Not Applicable
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or exp	losive limits
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	> 1
Relative density	1.1
Solubility(ies)	
Solubility (water)	Soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	30000 - 50000
Other information	
VOC (Weight %)	8 g/l <1% by weight
10. Stability and reactivity	
Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Decomposition may yield acrolein. No hazardous decomposition products are known.
11. Toxicological informat	ion

Information on likely routes of e	exposure
Inhalation	Prolonged inhalation may be harmful. May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity Species Test Results Glycerin (CAS 56-81-5) Acute Oral D50 Rat 12600 mg/kg 12600 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Risk of cancer cannot be excluded with prolonged exposure.
OSHA Specifically Regulated	d Substances (29 CFR 1910.1001-1050)
Not listed.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.
12. Ecological information	
Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Partition coefficient n-octand Glycerin (CAS 56-81-5)	ol / water (log Kow) -1.76
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Not applicable. Annex II of MARPOL 73/78 and the IBC Code

15. Regulatory information

US federal regulations	This product is a "Hazardou Standard, 29 CFR 1910.12 All components are on the	00.		Communication
TSCA Section 12(b) Export	Notification (40 CFR 707, Se			
Not regulated.				
	ed Substances (29 CFR 1910	0.1001-1050)		
CERCLA Hazardous Substa	ance List (40 CFR 302.4)			
Ammonium chloride (CA	• •	LISTED		
Zinc chloride (CAS 7646		LISTED		
Superfund Amendments and Re		SARA)		
Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No			
SARA 302 Extremely hazar	dous substance			
Not listed.				
SARA 311/312 Hazardous chemical	No			
SARA 313 (TRI reporting)				
Chemical name		CAS number	% by wt.	
Zinc chloride Ammonium chloride		7646-85-7 12125-02-9	3-7 1-5	
Other federal regulations				
Clean Air Act (CAA) Section	n 112 Hazardous Air Polluta	nts (HAPs) List		
	n 112(r) Accidental Release	Prevention (40 CFR	68.130)	
Not regulated.				
Safe Drinking Water Act (SDWA)	Not regulated.			
US state regulations				
US. Massachusetts RTK - S	Substance List			
Ammonium chloride (CA Glycerin (CAS 56-81-5) Zinc chloride (CAS 7646				
•	d Community Right-to-Know	/ Act		
Ammonium chloride (CA Glycerin (CAS 56-81-5) Zinc chloride (CAS 7646	S 12125-02-9)			
	Ind Community Right-to-Kno	ow Law		
Ammonium chloride (CA Glycerin (CAS 56-81-5) Zinc chloride (CAS 7646	S 12125-02-9)			
US. Rhode Island RTK	0 40405 00 0			
Ammonium chloride (CA Zinc chloride (CAS 7646				
	65 Water and Toxic Enforcement listed as carcinogens or repro		ition 65): This material is r	ot known to contain
International Inventories				
Country(s) or region	Inventory name			On inventory (yes/no)*
Australia	Australian Inventory of Che	emical Substances (A	ICS)	Yes
Canada	Domestic Substances List	(DSL)		Yes
Canada	Non-Domestic Substances	List (NDSL)		No

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	27-October-2014
Revision date	19-February-2015
Version #	04
HMIS® ratings	Health: 3 Flammability: 0 Physical hazard: 0
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for use, handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

PLUMBER'S PUTTY CAULKING AND SEALING COMPOUND

MASILLA PARA USO DE PLOMEROS COMPUESTO PARA ENMASILLAR Y SELLAMIENTO

For setting bowls, fixtures, faucets, sink frames and strainers. Will not crack, separate, crumble, harden or starink. Para Tijar Inodoros, accesorios, Ilaves, fregaderos y escurridores. No se agrieta, separa, desmenuza, endurece o encoge.

Node in USA Necho en EE.UU. 5 885 2.27 kg

#31174



SAFETY DATA SHEET

1. Identification

Product identifier	Oatey Plumber's Putty		
Other means of identification			
Product code	1705E		
Synonyms	Part Numbers: 31166, 31167, 31170, 31174, 48003, 48004		
Recommended use	Plumbing Mastic		
Recommended restrictions	Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.		
Manufacturer/Importer/Supplier/	Distributor information		
Company Name	Oatey Co.		
Address	4700 West 160th St.		
	Cleveland, OH 44135		
Telephone	216-267-7100		
E-mail	info@oatey.com		
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)		
Emergency First Aid	1-877-740-5015		
Contact person	MSDS Coordinator		
2. Hazard(s) identification			
Physical hazards	Not classified.		
Health hazards	Not classified.		
OSHA defined hazards	Not classified.		
Label elements			
Hazard symbol	None.		
Signal word	None.		
Hazard statement	The mixture does not meet the criteria for classification.		
Precautionary statement			
Prevention	Observe good industrial hygiene practices.		
Response	Wash hands after handling.		
Storage	Store away from incompatible materials.		
Disposal	Dispose of waste and residues in accordance with local authority requirements.		
Hazard(s) not otherwise classified (HNOC)	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.		

classified (HNOC)

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	% 60-90	
Limestone	1317-65-3		
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	5-30	
Crystalline silica (Quartz)	14808-60-7	<1	
Other components below reportable levels		9.85	

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
Most important symptoms/effects, acute and delayed	Coughing.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Unsuitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Use water spray to cool unopened containers.
Specific methods General fire hazards	Use standard firefighting procedures and consider the hazards of other involved materials. No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.	
Methods and materials for containment and cleaning up	Stop the flow of material, if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.	
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.	
7. Handling and storage		
Precautions for safe handling	Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Avoid prolonged exposure	

Conditions for safe storage, including any incompatibilities

where dust is formed. Do not breathe dust. Avoid prolonged exposure. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	Form
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	PEL	5 mg/m3	Mist.
		2000 mg/m3 500 ppm	
Limestone (CAS 1317-65-3)	PEL	5 mg/m3 15 mg/m3	Respirable fraction. Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Туре	Value	Form
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.3 mg/m3	Total dust.
, , , , , , , , , , , , , , , , , , ,		0.1 mg/m3	Respirable.
US. ACGIH Threshold Limit	Values		
Components	Туре	Value	Form
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	TWA	5 mg/m3	Inhalable fraction.
US. NIOSH: Pocket Guide to	o Chemical Hazards		
Components	Туре	Value	Form
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	Ceiling	1800 mg/m3	
	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
Limestone (CAS 1317-65-3)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
ological limit values	No biological exposure limits noted for the ingredient(s).		
posure guidelines	Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.		
propriate engineering htrols	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.		
lividual protection measures, Eye/face protection	such as personal protective equipme Wear safety glasses with side shields		
Skin protection			
Hand protection	Wear appropriate chemical resistant g	loves.	
Other	Wear suitable protective clothing.		
Respiratory protection	Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.		
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.		
neral hygiene nsiderations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.		

9. Physical and chemical properties

Appearance		
Physical state	Solid.	
Form	Putty.	
Color	Off-white.	
Odor	Slight.	
Odor threshold	Not available.	
рН	Not applicable	
Melting point/freezing point	Not available.	

Initial boiling point and boiling range	Not determined
Flash point	> 212.0 °F (> 100.0 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or exp	losive limits
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	1.87
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	> 500000 cP
Other information	
VOC (Weight %)	20 g/l

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Acids. Fluorine.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure		
Inhalation	Prolonged inhalation may be harmful.	
Skin contact	No adverse effects due to skin contact are expected.	
Eye contact	Direct contact with eyes may cause temporary irritation.	
Ingestion	Expected to be a low ingestion hazard.	
Symptoms related to the physical, chemical and toxicological characteristics	Coughing.	
Information on toxicological effe	cts	
Acute toxicity	Not available.	
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	

Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.		
Carcinogenicity	In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) Risk of cancer cannot be excluded with prolonged exposure.		
IARC Monographs. Overall E	Evaluation of Carcinogenicity		
(CAS 64742-52-5)	drotreated heavy naphthenic	1 Carcinogenic to humans. 3 Not classifiable as to carcinogenicity to humans.	
NTP Report on Carcinogens			
Crystalline silica (Quartz) OSHA Specifically Regulate	(CAS 14808-60-7) d <mark>Substances (29 CFR 1910.1</mark> 0	Known To Be Human Carcinogen. 101-1050)	
Not listed.			
Reproductive toxicity	This product is not expected to	cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not classified.		
Specific target organ toxicity - repeated exposure	Not classified.		
Aspiration hazard	Not an aspiration hazard.		
Chronic effects	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.		
Further information	This product has no known adverse effect on human health.		
12. Ecological information			
Ecotoxicity		s environmentally hazardous. However, this does not exclude the tt spills can have a harmful or damaging effect on the environment.	
Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential			
Mobility in soil	No data available.		
Other adverse effects		al effects (e.g. ozone depletion, photochemical ozone creation , global warming potential) are expected from this component.	
13. Disposal consideration	IS		
Disposal instructions	Collect and reclaim or dispose	in sealed containers at licensed waste disposal site.	
Local disposal regulations	Dispose in accordance with all	applicable regulations.	
Hazardous waste code	The waste code should be ass disposal company.	igned in discussion between the user, the producer and the waste	

Waste from residues / unused
productsDispose of in accordance with local regulations. Empty containers or liners may retain some
product residues. This material and its container must be disposed of in a safe manner (see:
Disposal instructions).Contaminated packagingEmpty containers should be taken to an approved waste handling site for recycling or disposal.
Since emptied containers may retain product residue, follow label warnings even after container is

14. Transport information

DOT

Not regulated as dangerous goods.

ΙΑΤΑ

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to
Annex II of MARPOL 73/78 and
the IBC CodeNot applicable.

emptied.

15. Regulatory information

This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard **US** federal regulations Communication Standard, 29 CFR 1910.1200. TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not regulated. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not listed. CERCLA Hazardous Substance List (40 CFR 302.4) Not listed. Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No SARA 302 Extremely hazardous substance Not listed SARA 311/312 Hazardous No chemical SARA 313 (TRI reporting) Not regulated. Other federal regulations Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated. Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated. Safe Drinking Water Act Not regulated. (SDWA) US state regulations **US. Massachusetts RTK - Substance List** Crystalline silica (Quartz) (CAS 14808-60-7) Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5) Limestone (CAS 1317-65-3) US. New Jersey Worker and Community Right-to-Know Act Crystalline silica (Quartz) (CAS 14808-60-7) Limestone (CAS 1317-65-3) US. Pennsylvania Worker and Community Right-to-Know Law Crystalline silica (Quartz) (CAS 14808-60-7) Limestone (CAS 1317-65-3) **US. Rhode Island RTK** Not regulated. **US.** California Proposition 65 WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance Crystalline silica (Quartz) (CAS 14808-60-7) Methanol (CAS 67-56-1) International Inventories Country(s) or region Inventory name On inventory (yes/no)* United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory Yes *A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision 22-April-2015

Issue date

Revision date Version # HMIS® ratings

NFPA ratings

01 Health: 0 Flammability: 0 Physical hazard: 0



Disclaimer

Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Equipment Fuel

Soldering gases

Contents:

1. GASOLINE 2. DIESEL 3. LOW SULFUR DIESEL 4. MAPP GAS 5. PROPANE 6. ACETYLENE Section G





Material Name: Gasoline All Grades

SDS No. 9950 US GHS

Synonyms: Hess Conventional (Oxygenated and Non-oxygenated) Gasoline; Reformulated Gasoline (RFG); Reformulated Gasoline Blendstock for Oxygenate Blending (RBOB); Unleaded Motor or Automotive Gasoline

*** Section 1 - Product and Company Identification ***

Manufacturer Information

Hess Corporation 1 Hess Plaza Woodbridge, NJ 07095-0961

Phone: 732-750-6000 Corporate EHS Emergency # 800-424-9300 CHEMTREC www.hess.com (Environment, Health, Safety Internet Website)

* * * Section 2 - Hazards Identification * * *

GHS Classification:

Flammable Liquid - Category 2 Skin Corrosion/Irritation - Category 2 Germ Cell Mutagenicity - Category 1B Carcinogenicity - Category 1B Toxic to Reproduction - Category 1A Specific Target Organ Toxicity (Single Exposure) - Category 3 (respiratory irritation, narcosis) Specific Target Organ Toxicity (Repeat Exposure) - Category 1 (liver, kidneys, bladder, blood, bone marrow, nervous system) Aspiration Hazard - Category 1 Hazardous to the Aquatic Environment – Acute Hazard - Category 3

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

DANGER

Hazard Statements

Highly flammable liquid and vapour.

Causes skin irritation.

May cause genetic defects.

May cause cancer.

May damage fertility or the unborn child.

May cause respiratory irritation.

May cause drowsiness or dizziness.

Causes damage to organs (liver, kidneys, bladder, blood, bone marrow, nervous system) through prolonged or repeated exposure.

May be fatal if swallowed and enters airways.

Harmful to aquatic life.

Precautionary Statements

Prevention

Keep away from heat/sparks/open flames/hot surfaces. No smoking
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands and forearms thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe mist/vapours/spray.
Use only outdoors or in well-ventilated area.

Do not eat, drink or smoke when using this product.

Avoid release to the environment.

Response

In case of fire: Use water spray, fog, dry chemical fire extinguishers or hand held fire extinguisher.

IF ON SKIN (or hair): Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention.

IF exposed or concerned: Get medical advice/attention.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.

Get medical advice/attention if you feel unwell.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting.

Storage

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

*** Section 3 - Composition / Information on Ingredients ***

CAS #	Component	Percent
86290-81-5	Gasoline, motor fuel	100
108-88-3	Toluene	1-25
106-97-8	Butane	<10
1330-20-7	Xylenes (o-, m-, p- isomers)	1-15
95-63-6	Benzene, 1,2,4-trimethyl-	<6
64-17-5	Ethyl alcohol	0-10
100-41-4	Ethylbenzene	<3
71-43-2	Benzene	0.1-4.9

Material Name: Gasoline All Grades

SDS No. 9950

110-54-3	Hexane	0.5-4

A complex blend of petroleum-derived normal and branched-chain alkane, cycloalkane, alkene, and aromatic hydrocarbons. May contain antioxidant and multifunctional additives. Non-oxygenated Conventional Gasoline and RBOB do not have oxygenates (Ethanol). Oxygenated Conventional and Reformulated Gasoline will have oxygenates for octane enhancement or as legally required.

*** Section 4 - First Aid Measures ***

First Aid: Eyes

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

First Aid: Skin

Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or with waterless hand cleanser. Obtain medical attention if irritation or redness develops.

First Aid: Ingestion

DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

First Aid: Inhalation

Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards

See Section 9 for Flammability Properties.

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. Flowing product may be ignited by self-generated static electricity. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke). Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.

Extinguishing Media

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, or gaseous extinguishing agent.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

Firefighting foam suitable for polar solvents is recommended for fuel with greater than 10% oxygenate concentration.

Unsuitable Extinguishing Media

None

Fire Fighting Equipment/Instructions

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment. Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

*** Section 6 - Accidental Release Measures ***

Recovery and Neutralization

Carefully contain and stop the source of the spill, if safe to do so.

Materials and Methods for Clean-Up

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Caution, flammable vapors may accumulate in closed containers.

Emergency Measures

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Personal Precautions and Protective Equipment

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental Precautions

Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Prevention of Secondary Hazards

None

* * * Section 7 - Handling and Storage * * *

Handling Procedures

USE ONLY AS A MOTOR FUEL. DO NOT SIPHON BY MOUTH

Handle as a flammable liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Material Name: Gasoline All Grades

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents."

Storage Procedures

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

Incompatibilities

Keep away from strong oxidizers.

*** Section 8 - Exposure Controls / Personal Protection **

Component Exposure Limits

Gasoline, motor fuel (86290-81-5)

ACGIH: 300 ppm TWA 500 ppm STEL

Toluene (108-88-3)

ACGIH: 20 ppm TWA OSHA: 200 ppm TWA; 375 mg/m3 TWA 150 ppm STEL; 560 mg/m3 STEL NIOSH: 100 ppm TWA; 375 mg/m3 TWA 150 ppm STEL; 560 mg/m3 STEL

Butane (106-97-8)

ACGIH: 1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4)
OSHA: 800 ppm TWA; 1900 mg/m3 TWA
NIOSH: 800 ppm TWA; 1900 mg/m3 TWA

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH: 100 ppm TWA 150 ppm STEL OSHA: 100 ppm TWA; 435 mg/m3 TWA 150 ppm STEL; 655 mg/m3 STEL

Benzene, 1,2,4-trimethyl- (95-63-6)

NIOSH: 25 ppm TWA; 125 mg/m3 TWA

Ethyl alcohol (64-17-5)

ACGIH: 1000 ppm STEL OSHA: 1000 ppm TWA; 1900 mg/m3 TWA NIOSH: 1000 ppm TWA; 1900 mg/m3 TWA

Material Name: Gasoline All Grades

SDS No. 9950

Ethylbenzene (100-41-4)

ACGIH:	20 ppm TWA
OSHA:	100 ppm TWA; 435 mg/m3 TWA
	125 ppm STEL; 545 mg/m3 STEL
NIOSH:	100 ppm TWA; 435 mg/m3 TWA
	125 ppm STEL; 545 mg/m3 STEL

Benzene (71-43-2)

0.5 ppm TWA
2.5 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
5 ppm STEL (Cancer hazard, Flammable, See 29 CFR 1910.1028, 15 min); 0.5 ppm Action
Level; 1 ppm TWA
0.1 ppm TWA
1 ppm STEL

Hexane (110-54-3)

ACGIH:	50 ppm TWA
	Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA:	500 ppm TWA; 1800 mg/m3 TWA
NIOSH:	50 ppm TWA; 180 mg/m3 TWA

Engineering Measures

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

Personal Protective Equipment: Respiratory

A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

Personal Protective Equipment: Hands

Gloves constructed of nitrile, neoprene, or PVC are recommended.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

Personal Protective Equipment: Skin and Body

Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Translucent, straw-colored or light yellow	Odor:	Strong, characteristic aromatic hydrocarbon odor. Sweet-ether like
Physical State:	Liquid	pH:	ND
Vapor Pressure:	6.4 - 15 RVP @ 100 °F (38 °C)	Vapor Density:	AP 3-4
	(275-475 mm Hg @ 68 °F (20 °C)		
Boiling Point:	85-437 °F (39-200 °C)	Melting Point:	ND
Solubility (H2O):	Negligible to Slight	Specific Gravity:	0.70-0.78
Evaporation Rate:	10-11	VOC:	ND
Percent Volatile:	100%	Octanol/H2O Coeff.:	ND
Flash Point:	-45 °F (-43 °C)	Flash Point Method:	PMCC
Upper Flammability Limit	7.6%	Lower Flammability Limit	1.4%
(UFL):		(LFL):	
Burning Rate:	ND	Auto Ignition:	>530°F (>280°C)

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources.

Incompatible Products

Keep away from strong oxidizers.

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke). Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.

*** Section 11 - Toxicological Information ***

Acute Toxicity

A: General Product Information

Harmful if swallowed.

B: Component Analysis - LD50/LC50

Gasoline, motor fuel (86290-81-5)

Inhalation LC50 Rat >5.2 mg/L 4 h; Oral LD50 Rat 14000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg

Toluene (108-88-3)

Inhalation LC50 Rat 12.5 mg/L 4 h; Inhalation LC50 Rat >26700 ppm 1 h; Oral LD50 Rat 636 mg/kg; Dermal LD50 Rabbit 8390 mg/kg; Dermal LD50 Rat 12124 mg/kg

Butane (106-97-8)

Inhalation LC50 Rat 658 mg/L 4 h

Material Name: Gasoline All Grades

SDS No. 9950

Xylenes (o-, m-, p- isomers) (1330-20-7)

Inhalation LC50 Rat 5000 ppm 4 h; Inhalation LC50 Rat 47635 mg/L 4 h; Oral LD50 Rat 4300 mg/kg; Dermal LD50 Rabbit >1700 mg/kg

Benzene, 1,2,4-trimethyl- (95-63-6)

Inhalation LC50 Rat 18 g/m3 4 h; Oral LD50 Rat 3400 mg/kg; Dermal LD50 Rabbit >3160 mg/kg

Ethyl alcohol (64-17-5)

Oral LD50 Rat 7060 mg/kg; Inhalation LC50 Rat 124.7 mg/L 4 h

Ethylbenzene (100-41-4)

Inhalation LC50 Rat 17.2 mg/L 4 h; Oral LD50 Rat 3500 mg/kg; Dermal LD50 Rabbit 15354 mg/kg

Benzene (71-43-2)

Inhalation LC50 Rat 13050-14380 ppm 4 h; Oral LD50 Rat 1800 mg/kg

Hexane (110-54-3)

Inhalation LC50 Rat 48000 ppm 4 h; Oral LD50 Rat 25 g/kg; Dermal LD50 Rabbit 3000 mg/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Moderate irritant. Contact with liquid or vapor may cause irritation.

Potential Health Effects: Ingestion

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

Potential Health Effects: Inhalation

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

This product may cause genetic defects.

Carcinogenicity

A: General Product Information

May cause cancer.

Material Name: Gasoline All Grades

IARC has determined that gasoline and gasoline exhaust are possibly carcinogenic in humans. Inhalation exposure to completely vaporized unleaded gasoline caused kidney cancers in male rats and liver tumors in female mice. The U.S. EPA has determined that the male kidney tumors are species-specific and are irrelevant for human health risk assessment. The significance of the tumors seen in female mice is not known. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with effects to the central and peripheral nervous systems, liver, and kidneys. The significance of these animal models to predict similar human response to gasoline is uncertain.

This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. Benzene is listed as a human carcinogen by the NTP, IARC, OSHA and ACGIH.

B: Component Carcinogenicity

Gasoline, motor fuel (86290-81-5)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Toluene (108-88-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Xylenes (o-, m-, p- isomers) (1330-20-7)

- ACGIH: A4 Not Classifiable as a Human Carcinogen
- IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Ethyl alcohol (64-17-5)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
 IARC: Monograph 100E [in preparation] (in alcoholic beverages); Monograph 96 [2010] (in alcoholic beverages) (Group 1 (carcinogenic to humans))

Ethylbenzene (100-41-4)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans IARC: Monograph 77 [2000] (Group 2B (possibly carcinogenic to humans))

Benzene (71-43-2)

- ACGIH: A1 Confirmed Human Carcinogen
- OSHA: 5 ppm STEL (Cancer hazard, Flammable, See 29 CFR 1910.1028, 15 min); 0.5 ppm Action Level; 1 ppm TWA
- NIOSH: potential occupational carcinogen
- NTP: Known Human Carcinogen (Select Carcinogen)
- IARC: Monograph 100F [in preparation]; Supplement 7 [1987]; Monograph 29 [1982] (Group 1 (carcinogenic to humans))

Reproductive Toxicity

This product is suspected of damaging fertility or the unborn child.

Specified Target Organ General Toxicity: Single Exposure

This product may cause drowsiness or dizziness.

Material Name: Gasoline All Grades

Specified Target Organ General Toxicity: Repeated Exposure

This product causes damage to organs through prolonged or repeated exposure.

Aspiration Respiratory Organs Hazard

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

*** Section 12 - Ecological Information ***

Ecotoxicity

A: General Product Information

Very toxic to aquatic life with long lasting effects. Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Gasoline, motor fuel (86290-81-5)		
Test & Species		Conditions
96 Hr LC50 Alburnus alburnus	119 mg/L [static]	
96 Hr LC50 Cyprinodon variegatus	82 mg/L [static]	
72 Hr EC50 Pseudokirchneriella	56 mg/L	
subcapitata		
24 Hr EC50 Daphnia magna	170 mg/L	
Toluene (108-88-3)		
Test & Species		Conditions
96 Hr LC50 Pimephales promelas	15.22-19.05 mg/L	1 day old
	[flow-through]	
96 Hr LC50 Pimephales promelas	12.6 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	5.89-7.81 mg/L	
96 Hr LC50 Oncorhynchus mykiss	[flow-through] 14.1-17.16 mg/L	
30 Th EC30 Oncomynenus mykiss	[static]	
96 Hr LC50 Oncorhynchus mykiss	5.8 mg/L [semi-	
, ,	static]	
96 Hr LC50 Lepomis macrochirus	11.0-15.0 mg/L	
	[static]	
96 Hr LC50 Oryzias latipes	54 mg/L [static]	
96 Hr LC50 Poecilia reticulata	28.2 mg/L [semi-	
96 Hr LC50 Poecilia reticulata	static] 50.87-70.34 mg/L	
30 Th 2030 T becina reliculata	[static]	
96 Hr EC50 Pseudokirchneriella	>433 mg/L	
subcapitata	0	
72 Hr EC50 Pseudokirchneriella	12.5 mg/L [static]	
subcapitata		
48 Hr EC50 Daphnia magna	5.46 - 9.83 mg/L	
48 Hr EC50 Daphaia magaa	[Static]	
48 Hr EC50 Daphnia magna	11.5 mg/L	
Xylenes (o-, m-, p- isomers) (1330-20-7	7)	
Test & Species	-	Conditions
96 Hr LC50 Pimephales promelas	13.4 mg/L [flow-	

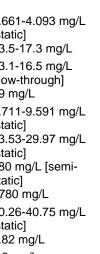
13.4 mg/L [flow through]

Material Name: Gasoline All Grades

2.661-4.093 mg/L 96 Hr LC50 Oncorhynchus mykiss [static] 96 Hr LC50 Oncorhynchus mykiss 13.5-17.3 mg/L 96 Hr LC50 Lepomis macrochirus 13.1-16.5 mg/L [flow-through] 96 Hr LC50 Lepomis macrochirus 19 mg/L 7.711-9.591 mg/L 96 Hr LC50 Lepomis macrochirus [static] 23.53-29.97 mg/L 96 Hr LC50 Pimephales promelas [static] 96 Hr LC50 Cyprinus carpio 780 mg/L [semistatic] 96 Hr LC50 Cyprinus carpio >780 mg/L 96 Hr LC50 Poecilia reticulata 30.26-40.75 mg/L [static] 48 Hr EC50 water flea 3.82 mg/L 48 Hr LC50 Gammarus lacustris 0.6 mg/L Benzene, 1,2,4-trimethyl- (95-63-6) **Test & Species** 96 Hr LC50 Pimephales promelas 7.19-8.28 mg/L [flow-through] 6.14 mg/L 48 Hr EC50 Daphnia magna Ethyl alcohol (64-17-5) **Test & Species** 96 Hr LC50 Oncorhynchus mykiss 12.0 - 16.0 mL/L [static] 96 Hr LC50 Pimephales promelas 96 Hr LC50 Pimephales promelas [flow-through] 48 Hr LC50 Daphnia magna 24 Hr EC50 Daphnia magna 10800 mg/L 48 Hr EC50 Daphnia magna 2 mg/L [Static] Ethylbenzene (100-41-4) **Test & Species** 96 Hr LC50 Oncorhynchus mykiss 11.0-18.0 mg/L [static] 4.2 mg/L [semi-96 Hr LC50 Oncorhynchus mykiss

96 Hr LC50 Pimephales promelas 96 Hr LC50 Lepomis macrochirus 96 Hr LC50 Pimephales promelas

96 Hr LC50 Poecilia reticulata 72 Hr EC50 Pseudokirchneriella subcapitata 96 Hr EC50 Pseudokirchneriella subcapitata 72 Hr EC50 Pseudokirchneriella subcapitata



SDS No. 9950

Conditions

Conditions

>100 mg/L [static] 13400 - 15100 mg/L 9268 - 14221 mg/L

Conditions

static] 7.55-11 mg/L [flowthrough] 32 mg/L [static] 9.1-15.6 mg/L [static] 9.6 mg/L [static] 4.6 mg/L >438 mg/L 2.6 - 11.3 mg/L [static]

Material Name: Gasoline All Grades

96 Hr EC50 Pseudokirchneriella subcapitata 48 Hr EC50 Daphnia magna	1.7 - 7.6 mg/L [static] 1.8 - 2.4 mg/L	
Benzene (71-43-2)		
Test & Species		Conditions
96 Hr LC50 Pimephales promelas	10.7-14.7 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	5.3 mg/L [flow- through]	
96 Hr LC50 Lepomis macrochirus	22.49 mg/L [static]	
96 Hr LC50 Poecilia reticulata	28.6 mg/L [static]	
96 Hr LC50 Pimephales promelas	22330-41160 µg/L [static]	
96 Hr LC50 Lepomis macrochirus	70000-142000 μg/L [static]	
72 Hr EC50 Pseudokirchneriella subcapitata	29 mg/L	
48 Hr EC50 Daphnia magna	8.76 - 15.6 mg/L [Static]	
48 Hr EC50 Daphnia magna	10 mg/L	
Hexane (110-54-3)		
Test & Species		Conditions
96 Hr LC50 Pimephales promelas	2.1-2.98 mg/L [flow- through]	
24 Hr EC50 Daphnia magna	>1000 mg/L	

Persistence/Degradability

No information available.

Bioaccumulation

No information available.

Mobility in Soil

No information available.

*** Section 13 - Disposal Considerations ***

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 14 - Transportation Information * * *

Component Marine Pollutants

This material contains one or more of the following chemicals required by US DOT to be identified as marine pollutants.

Component	CAS #	
Gasoline, motor fuel	86290-81-5	DOT regulated marine pollutant

DOT Information

Placard:

Shipping Name: Gasoline

UN #: 1203 Hazard Class: 3 Packing Group: II



* * * Section 15 - Regulatory Information * * *

Regulatory Information

A: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Toluene (108-88-3)

SARA 313: 1.0 % de minimis concentration CERCLA: 1000 lb final RQ; 454 kg final RQ

Xylenes (o-, m-, p- isomers) (1330-20-7)

SARA 313: 1.0 % de minimis concentration CERCLA: 100 lb final RQ; 45.4 kg final RQ

Benzene, 1,2,4-trimethyl- (95-63-6)

SARA 313: 1.0 % de minimis concentration

Ethylbenzene (100-41-4)

SARA 313: 0.1 % de minimis concentration

CERCLA: 1000 lb final RQ; 454 kg final RQ

Benzene (71-43-2)

SARA 313: 0.1 % de minimis concentration

CERCLA: 10 lb final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule); 4.54 kg final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule)

Material Name: Gasoline All Grades

SDS No. 9950

Hexane (110-54-3)

SARA 313: 1.0 % de minimis concentration CERCLA: 5000 lb final RQ; 2270 kg final RQ

SARA Section 311/312 – Hazard Classes

Acute Health	Chronic Health	<u>Fire</u>	Sudden Release of Pressure	Reactive
Х	Х	Х		

Component Marine Pollutants

This material contains one or more of the following chemicals required by US DOT to be identified as marine pollutants.

Component	CAS #	
Gasoline, motor fuel	86290-81-5	DOT regulated marine pollutant

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Gasoline, motor fuel	86290-81-5	No	No	No	No	Yes	No
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes	No
Butane	106-97-8	Yes	Yes	Yes	Yes	Yes	No
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	Yes	Yes	Yes	Yes	No
Benzene, 1,2,4-trimethyl-	95-63-6	No	Yes	Yes	Yes	Yes	No
Ethyl alcohol	64-17-5	Yes	Yes	Yes	Yes	Yes	No
Ethylbenzene	100-41-4	Yes	Yes	Yes	Yes	Yes	No
Benzene	71-43-2	Yes	Yes	Yes	Yes	Yes	No
Hexane	110-54-3	No	Yes	Yes	Yes	Yes	No

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer. WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects.

Material Name: Gasoline All Grades

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

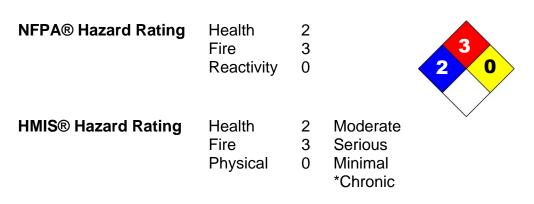
Component	CAS #	Minimum Concentration
Toluene	108-88-3	1 %
Butane	106-97-8	1 %
Benzene, 1,2,4-trimethyl-	95-63-6	0.1 %
Ethyl alcohol	64-17-5	0.1 %
Ethylbenzene	100-41-4	0.1 %
Benzene	71-43-2	0.1 %
Hexane	110-54-3	1 %

Additional Regulatory Information

Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Gasoline, motor fuel	86290-81-5	No	DSL	EINECS
Toluene	108-88-3	Yes	DSL	EINECS
Butane	106-97-8	Yes	DSL	EINECS
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	DSL	EINECS
Benzene, 1,2,4-trimethyl-	95-63-6	Yes	DSL	EINECS
Ethyl alcohol	64-17-5	Yes	DSL	EINECS
Ethylbenzene	100-41-4	Yes	DSL	EINECS
Benzene	71-43-2	Yes	DSL	EINECS
Hexane	110-54-3	Yes	DSL	EINECS

*** Section 16 - Other Information ***



Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

Literature References

None

Material Name: Gasoline All Grades

Other Information

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

End of Sheet



SAFETY DATA SHEET



Section 1. Identification

Product name	Fuels, diesel
Other means of identification	MA LS, Marine Distillate Fuels, Ultra Low Sulfur No. 2 Diesel Fuel
SDS #	SMF2115
Code	SMF2115
Relevant identified uses of	of the substance or mixture and uses advised against
Product use	Fuel for marine engines.
Supplier	BP Products North America Inc. 150 West Warrenville Road Naperville, Illinois 60563-8460 USA
EMERGENCY HEALTH	1 (800) 447-8735
	Outside the US: +1 703-527-3887 (CHEMTREC)
EMERGENCY SPILL INFORMATION:	1 (800) 424-9300 CHEMTREC (USA)
OTHER PRODUCT INFORMATION	1 (866) 4 BP - MSDS (866-427-6737 Toll Free - North America) email: bpcares@bp.com

Section 2. Hazards identification

Classification of the substance or mixture

OSHA/HCS status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1

GHS label elements Hazard pictograms

Signal word Hazard statements



Danger Combustible liquid. Harmful if inhaled. Causes skin irritation. Suspected of causing cancer. May be fatal if swallowed and enters airways. May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Product name	F uels, diesel		Product code	SMF2115	Page: 1/15
Version 1	Date of issue 10/07/2014.	Format	US	Language	ENGLISH
			(US)		(ENGLISH)

Section 2. Hazards identification

Prevention	Obtain special instructions before use. Wear protective gloves and eye protection. Do not breathe vapor. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical/ventilating/lighting/material-handling equipment. Avoid release to the environment.
Response	 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.
Storage	Keep cool.
Disposal	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified	This material may contain significant quantities of polycyclic aromatic hydrocarbons (PAHs), some of which have been shown by experimental studies to induce skin cancer. Note: High Pressure Applications Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. See 'Notes to physician' under First-Aid Measures, Section 4 of this Safety Data Sheet.

Section 3. Composition/information on ingredients

May also contain small quantities of proprietary performance additives.

Substance/mixture	Mixture		
Ingredient name		CAS number	%
Fuels, diesel, No 2 Contains: naphthalene		68476-34-6 91-20-3	> 99 1 - 3

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.
Skin contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention.
Ingestion	Do not induce vomiting. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Aspiration hazard if swallowed. Can enter lungs and cause damage. Get medical attention immediately.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Most important symptoms/effects, acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

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Section 4. First aid measures

indication of infinediate mo	edical attention and special treatment needed, if necessary
Notes to physician	Treatment should in general be symptomatic and directed to relieving any effects. Product can be aspirated on swallowing or following regurgitation of stomach contents, and can cause severe and potentially fatal chemical pneumonitis, which will require urgent treatment. Because of the risk of aspiration, induction of vomiting and gastric lavage should be avoided. Gastric lavage should be undertaken only after endotracheal intubation. Monitor for cardiac dysrhythmias.
	Note: High Pressure Applications Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discolored and extremely painful with extensive subcutaneous necrosis. Surgical exploration should be undertaken without delay. Thorough and extensive debridement of the wound and underlying tissue is necessary to minimize tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable distances along tissue planes.
Specific treatments	No specific treatment.

Section 5. Fire-fighting measures

Extinguishing media	
Suitable extinguishing media	In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.
Unsuitable extinguishing media	Do not use water jet.
Specific hazards arising from the chemical	Combustible liquid. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.
Hazardous combustion products	Combustion products may include the following: carbon oxides (CO, CO₂) (carbon monoxide, carbon dioxide) other hazardous substances.
Special protective actions for fire-fighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. This material is toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Special protective equipment for fire-fighters	Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures				
For non-emergency personnel	Immediately contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling. Eliminate all ignition sources.			
For emergency responders	Entry into a confined space or poorly ventilated area contaminated with vapor, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. See also the information in "For non-emergency personnel".			

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Section 6. Accidental release measures

Environmental precautions Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

Small spill	Eliminate all ignition sources. Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. The method and equipment used must be in conformance with appropriate regulations and industry practice on explosive atmospheres.
Large spill	Eliminate all ignition sources. Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Dike spill area and do not allow product to reach sewage system and surface or ground water. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilled product. The method and equipment used must be in conformance with appropriate regulations and industry practice on explosive atmospheres. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for	<u>r safe handling</u>	L			
Protective me	asures	on skin or clothing when ventilation is surface waterways Keep in the origina material, kept tight away from heat, sp electrical (ventilatin tools. Do not brea use. Do not handl	e personal protective equipment . Use only with adequate ventila inadequate. Avoid contact of sp a. Empty containers retain produ- al container or an approved alter tly closed when not in use. Do n barks, open flame or any other ig ng, lighting and material handling the vapor or mist. Avoid expose e until all safety precautions hav in hazard if swallowed. Can enter	ation. Wear appropria pilled material and ru uct residue and can b native made from a c tot reuse container. S gnition source. Use of g) equipment. Use of ure - obtain special in re been read and und	ate respirator noff with soil and e hazardous. compatible Store and use explosion-proof nly non-sparking structions before lerstood. Do not
Advice on ger occupational		handled, stored an clothing and protee	nd smoking should be prohibited nd processed. Wash thoroughly ctive equipment before entering ion on hygiene measures.	after handling. Rem	ove contaminated
Conditions for including any incompatibilitie	_	Store in original co area, away from in locked up. Elimina container tightly clo containers designe be carefully reseal	ce with local regulations. Store i ontainer protected from direct su icompatible materials (see Secti- ate all ignition sources. Separate osed and sealed until ready for u ed for use with this product. Cor ed and kept upright to prevent le ppropriate containment to avoid	nlight in a dry, cool ar on 10) and food and e from oxidizing mate use. Store and use o ntainers that have bee eakage. Do not store	nd well-ventilated drink. Store erials. Keep nly in equipment/ en opened must in unlabeled
		flammability/explos flash point must no vapor in tank head flammable and car sources during fillin tanks. If entry to ve tanks or other com measures to be pu practice on confine	n vapors can build up in the hear sion hazards even at temperatur of be regarded as a reliable indic Ispaces). Tank headspaces sho re should be taken to avoid station ng, ullaging and sampling from s essels is necessary, follow perm fined space requires a full risk as it in place in conformance with a ed space entry. When the produ ng) and when sampling, there is	es below the normal cator of the potential f build always be regard c electrical discharge storage tanks. Do no it to work procedures ssessment and appro ppropriate regulation uct is pumped (e.g. du	flash point (note: flammability of led as potentially and all ignition t enter storage c. Entry to any opriate control s and industry uring filling,
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Section 7. Handling and storage

equipment used is properly earthed or bonded to the tank structure. Electrical equipment should not be used unless it is intrinsically safe (i.e. will not produce sparks). Explosive air/vapor mixtures may form at ambient temperature. If product comes into contact with hot surfaces, or leaks occur from pressurized fuel pipes, the vapor or mists generated will create a flammability or explosion hazard. Product contaminated rags, paper or material used to absorb spillages, represent a fire hazard, and should not be allowed to accumulate. Dispose of safely immediately after use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Fuels, diesel, No 2	ACGIH TLV (United States). Absorbed
	through skin.
	TWA: 100 mg/m ³ , (measured as total
	hydrocarbons) 8 hours. Issued/Revised:
	1/2007 Form: Inhalable fraction and vapor
naphthalene	ACGIH TLV (United States). Absorbed
	through skin.
	TWA: 52 mg/m ³ 8 hours. Issued/Revised:
	5/1996
	TWA: 10 ppm 8 hours. Issued/Revised:
	5/1996
	OSHA PEL (United States).
	TWA: 50 mg/m ³ 8 hours. Issued/Revised:
	6/1993
	TWA: 10 ppm 8 hours. Issued/Revised:
	6/1993

While specific OELs for certain components may be shown in this section, other components may be present in any mist, vapor or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Appropriate engineering controls	All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained. Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards. Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
Individual protection measures	
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	Chemical splash goggles.
Skin protection	

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Section 8. Exposure controls/personal protection

Hand protection	Wear chemical resistant gloves. Recommended: Nitrile gloves.
	Do not re-use gloves. Protective gloves must give suitable protection against mechanical risks (i.e. abrasion, blade cut and puncture). Protective gloves will deteriorate over time due to physical and chemical damage. Inspect and replace gloves on a regular basis. The frequency of replacement will depend upon the circumstances of use.
	Consult your supervisor or Standard Operating Procedure (S.O.P) for special handling instructions.
Body protection	Use of protective clothing is good industrial practice. Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required. Wear suitable protective clothing. Footwear highly resistant to chemicals. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For greatest effectiveness against static electricity, overalls, boots and gloves should all be anti-static. When there is a risk of ignition wear inherently fire resistant protective clothes and gloves. Work clothing / overalls should only be done by professional cleaners who have been told about the hazards of the contamination. Always keep contaminated work clothing away from uncontaminated work clothing and uncontaminated personal clothes. When the risk of skin exposure is high (from experience this could apply to the following tasks: cleaning work, maintenance and service, filling and transfer, taking samples and cleaning up spillages) then a chemical protective suit and boots will be required. Personal protective equipment for the body should be approved by a specialist before handling this product.
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Use only with adequate ventilation. Do not breathe vapor or mist. If ventilation is inadequate, use a NIOSH certified respirator with an organic vapor cartridge and P95 particulate filter. If operating conditions cause high vapor concentrations or the TLV is exceeded, use supplied-air respirator.
	CAUTION: The protection provided by air-purifying respirators is limited. Use a positive pressure air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are not known, or if concentrations exceed the protection limits of air-purifying respirator.
	Use with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. If there is a requirement for the use of a respiratory protective device, but the use of breathing apparatus (independent of ambient atmosphere) is not required, then a suitable filtering device must be worn. The filter class must be suitable for the maximum contaminant concentration (gas/vapor/ aerosol/particulates) that may arise when handling the product. The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Section 9. Physical and chemical properties

<u>Appearance</u>	
Physical state	Liquid.
Color	Yellow. [Light]
Odor	Kerosene
Odor threshold	Not available.
рН	Not available.

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Section 9. Physical and chemical properties

Melting point	Not available.
Boiling point	162.78°C (325°F)
Flash point	Closed cup: >60°C (>140°F)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable. Based on - Physical state
Lower and upper explosive (flammable) limits	Lower: 0.7% Upper: 5%
Vapor pressure	<0.266 kPa (<2 mm Hg) at 20°C
Vapor density	Not available.
Density	860 kg/m³ (0.86 g/cm³)
Solubility	negligible <0.1%
Partition coefficient: n- octanol/water	Not available.
Auto-ignition temperature	257°C (494.6°F)
Decomposition temperature	Not available.
Viscosity	Dynamic: 0.003 Pa⋅s (3 cP) at 37.778°C Kinematic: 2 to 11 mm²/s (2 to 11 cSt) at 40°C

Section 10. Stability and reactivity

Reactivity	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	Keep away from heat, sparks and flame. Avoid all possible sources of ignition (spark or flame).
Incompatible materials	Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis. halogenated compounds.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity					
Product/ingredinate	ent Test	Species	Result	Exposure	Remarks
Fuels, diesel, No	2 LC50 Inhalation Dusts and mists	Rat	4.1 mg/l	4 hours	Based on Diesel fuel
	LD50 Dermal	Rabbit	>4300 mg/kg	-	Based on No. 2 Heating Oil.
	LD50 Dermal	Rabbit	>4300 mg/kg	-	Based on Diesel fuel
	LD50 Oral	Rat	17900 mg/kg	-	Based on No. 2 Heating Oil.
	LD50 Oral	Rat	7600 mg/kg	-	Based on Diesel
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Conclusion/Summary	Not	available.					fuel	
ritation/Corrosion								
Product/ingredient name	Species	Result	Score	Exposure	Observa	tion Conc.	Remarks	
Fuels, diesel, No 2	Rabbit	Skin - Irritation	-	-	-	-	Based on No. 2 Heating Oil.	
	Rabbit	Skin - Irritation	-	-	-	-	Based on Diesel fuel	
	Rabbit	Eyes - Non- irritating to the eyes.	-	-	-	-	Based on No. 2 Heating Oil	
	Rabbit	Eyes - Non- irritating to the eyes.	-	-	-	-	Based on Diesel fuel	
ensitizer	_		_	_				
Product/ingredient nar		pute of posure	Spec	ies	Result		Remarks	
Fuels, diesel, No 2	sk		Guin	ea pig	Not sen	sitizing	Based on No. 2 Heating Oil.	
	sk	in	Guin	ea pig	Not sen	sitizing	Based on Diesel fuel	
<u>utagenicity</u>								
Product/ingredient nar Fuels, diesel, No 2	me Test OECD 471		Subject:	ent: In vitro			Remarks Based on Diesel fue	
	Equivalent to OECD 476 not guideline		Experim	ent: In vitro	Negative		Based on Heating Oil. Based on Heating Oil.	
			Subject: Mamma Cell: Ge	lian-Animal rm				
			Experim	riment: In vivo Negative				
			Subject: Cell: Sor	Unspecified natic	l			
Conclusion/Summary arcinogenicity	Not	classified. Bas	ed on ava	ailable data,	the classification	ation criteria	are not met.	
Product/ingredient	Species	Route	Ex	posure	Test	Result	Remarks	
Fuels, diesel, No 2	Mouse	Dermal	De	sitive - ermal - ispecified	2 years	-	Based on Heating Oil.	
Conclusion/Summary <u>Classification</u>	Sus	pected of caus		-				
Product/ingredient n	ame OS	HA IARC	NTP					
naphthalene	-	2B	Reas	onably antic	ipated to be	a human ca	rcinogen.	
IARC : 2B - Possible carcinog	gen to humar	l.						
NTP :								

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Product/ingredient name	Maternal	Fertility	Development	Species	Result	Exposure
Fuels, diesel, No 2	toxicity	-	<mark>toxin</mark> Negative	Rat	Derma	l 20 days
	-	-	Negative	Rat	Derma	l 10 days
	-	-	Negative	Rat	Derma	l 10 days
Conclusion/Summary	not met. Fertility: Not cla	ssified. Base a lactation: N	l. Based on availa ed on available da lot classified. Bas	ata, the classifi	cation crit	on criteria are eria are not met.
Specific target organ toxicity	<u>y (repeated expo</u>	<u>sure)</u>				
Name			Category	Route of exposure		Target organs
Fuels, diesel, No 2			Category 2	Not deter		Not determined
Aspiration hazard						
Name Fuels, diesel, No 2				Result ASPIRATION H	IAZARD -	Category 1
nformation on the likely outes of exposure	Routes of enti	ry anticipated	l: Oral, Dermal, Ir	nhalation.		
otential acute health effects						
Eye contact	No known sig	nificant effect	ts or critical haza	rds.		
Skin contact	Causes skin i	ritation.				
Inhalation	Harmful if inha	aled.				
Ingestion	Irritating to me	with throat a				
••••	if liquid is aspi			piration hazard	if swallow	ved harmful or fata
symptoms related to the physic	if liquid is aspi sical, chemical a	rated into lur nd toxicoloc	ngs. gical characteris	<u>tics</u>	if swallow	ved harmful or fata
symptoms related to the physic	if liquid is asp sical, chemical a Adverse symp pain or irritatio watering	rated into lur nd toxicoloc otoms may in	ngs.	<u>tics</u>	if swallow	ved harmful or fata
symptoms related to the physic	if liquid is aspi sical, chemical a Adverse symp pain or irritatio watering redness	rated into lur nd toxicolog otoms may in on	ngs. gical characteris	<mark>tics</mark> ıg:	if swallow	ved harmful or fata
Symptoms related to the physic Eye contact Skin contact	if liquid is aspi sical, chemical a Adverse symp pain or irritatio watering redness Adverse symp irritation redness Adverse symp nausea or vor headache drowsiness/fa dizziness/vert	rated into lur nd toxicolog otoms may in- otoms may in- otoms may in- niting tigue igo	ngs. gical characteris clude the followir	<mark>tics</mark> g: g:	if swallow	ved harmful or fata
Eye contact Skin contact Inhalation	if liquid is aspi sical, chemical a Adverse symp pain or irritatio watering redness Adverse symp irritation redness Adverse symp nausea or vor headache drowsiness/fa dizziness/vert unconsciousn	rated into lur nd toxicolog otoms may in- otoms may in- otoms may in- niting tigue igo ess otoms may in	ngs. gical characteris clude the followin clude the followin	tics g: g: g:	if swallow	ved harmful or fata
ymptoms related to the phys Eye contact Skin contact Inhalation Ingestion	if liquid is aspi sical, chemical a Adverse symp pain or irritatio watering redness Adverse symp irritation redness Adverse symp nausea or vor headache drowsiness/fa dizziness/vert unconsciousn Adverse symp nausea or vor	rated into lur nd toxicolog otoms may in otoms may in niting tigue igo ess otoms may in niting	ngs. gical characteris clude the followin clude the followin clude the followin	tics Ig: Ig: Ig:		ved harmful or fata
ymptoms related to the phys Eye contact Skin contact Inhalation Ingestion Pelayed and immediate effect Short term exposure	if liquid is aspi sical, chemical a Adverse symp pain or irritatio watering redness Adverse symp irritation redness Adverse symp nausea or vor headache drowsiness/fa dizziness/vert unconsciousn Adverse symp nausea or vor	rated into lur nd toxicolog otoms may in- otoms may in- otoms may in- niting tigue igo ess otoms may in- niting nic effects fr	ngs. gical characteris clude the followin clude the followin clude the followin clude the followin	tics Ig: g: Ig: Ig: Ig:	sure	
ymptoms related to the phys Eye contact Skin contact Inhalation	if liquid is aspi sical, chemical a Adverse symp pain or irritatio watering redness Adverse symp irritation redness Adverse symp nausea or vor headache drowsiness/fa dizziness/vert unconsciousn Adverse symp nausea or vor	rated into lur nd toxicolog otoms may in- otoms may in- otoms may in- otoms may in- niting bit offects fr or fumes may luce skin can liting from the e nose, mout	ngs. gical characteris clude the followin clude the followin clude the followin clude the followin clude the followin com short and lo y contain polycycl cer. May be han ermal decomposit th and respiratory	tics g: g: g: g: g: ng: ng term expo ic aromatic hyo mful by inhalati ion products o r tract. Vapor,	sure drocarbon ion if expo ccurs. Va mist or fu	s some of which are osure to vapor, mists apor, mist or fume me may cause eye
ymptoms related to the phys Eye contact Skin contact Inhalation lelayed and immediate effect Short term exposure Potential immediate	if liquid is aspi sical, chemical a Adverse symp pain or irritatio watering redness Adverse symp irritation redness Adverse symp nausea or vor headache drowsiness/fa dizziness/vert unconsciousn Adverse symp nausea or vor ts and also chron Vapor, mists of known to proc or fumes resu may irritate th irritation. Exp the eyes. As with all suc	rated into lur nd toxicolog otoms may in- otoms may in- otoms may in- otoms may in- niting tigue igo ess otoms may in- niting nic effects fr or fumes may luce skin can lting from the e nose, moutor osure to vapor ch products c contact may	ngs. gical characteris clude the followin clude the followin clude the followin clude the followin clude the followin com short and lo y contain polycycl icer. May be han ermal decomposit th and respiratory or, mist or fume r containing potentia eventually result	tics g: g: g: g: ng: ng: ng term expo ic aromatic hyo mful by inhalati ion products o ract. Vapor, nay cause stin ally harmful lev	sure drocarbon ion if expo ccurs. Va mist or fu ging, redn vels of PC.	s some of which are osure to vapor, mists apor, mist or fume me may cause eye ness and watering of As, prolonged or
Eye contact Skin contact Inhalation Ingestion Delayed and immediate effect Short term exposure Potential immediate effects Potential delayed effects	if liquid is aspi sical, chemical a Adverse symp pain or irritatio watering redness Adverse symp irritation redness Adverse symp nausea or vor headache drowsiness/fa dizziness/vert unconsciousn Adverse symp nausea or vor te and also chron Vapor, mists of known to proc or fumes resu may irritate th irritation. Exp the eyes. As with all suc repeated skin	rated into lur nd toxicolog otoms may in- otoms may in- otoms may in- otoms may in- niting tigue igo ess otoms may in- niting nic effects fr or fumes may luce skin can lting from the e nose, moutor osure to vapor ch products c contact may	ngs. gical characteris clude the followin clude the followin clude the followin clude the followin clude the followin com short and lo y contain polycycl icer. May be han ermal decomposit th and respiratory or, mist or fume r containing potentia eventually result	tics g: g: g: g: g: g: ng term expo ic aromatic hyd mful by inhalati ion products o r tract. Vapor, nay cause stin ally harmful lev in dermatitis o	sure drocarbon ion if expo ccurs. Va mist or fu ging, redn vels of PC. r more se	s some of which are osure to vapor, mists apor, mist or fume me may cause eye ness and watering of As, prolonged or
Symptoms related to the phys Eye contact Skin contact Inhalation Ingestion Delayed and immediate effect Short term exposure Potential immediate effects Potential delayed effects	if liquid is aspi sical, chemical a Adverse symp pain or irritatio watering redness Adverse symp irritation redness Adverse symp nausea or vor headache drowsiness/fa dizziness/vert unconsciousn Adverse symp nausea or vor te and also chron Vapor, mists of known to proc or fumes resu may irritate th irritation. Exp the eyes. As with all suc repeated skin disorders inclu	rated into lur nd toxicolog otoms may in- otoms may in- otoms may in- otoms may in- niting tigue igo ess otoms may in- niting nic effects fr or fumes may luce skin can lting from the e nose, moutor osure to vapor ch products c contact may uding cancer.	ngs. gical characteris clude the followin clude the followin c	tics g: g: g: g: g: g: ng term expo ic aromatic hyd mful by inhalati ion products o r tract. Vapor, nay cause stin ally harmful lev in dermatitis o	Sure drocarbon ion if expo ccurs. Va mist or fu ging, redn rels of PC, r more se	s some of which are soure to vapor, mists apor, mist or fume me may cause eye ness and watering of As, prolonged or rious irreversible ski

Section 11. Toxicological information

Not available.
Not available.
<u>ts</u>
May cause damage to organs through prolonged or repeated exposure. Vapor, mists or fumes may contain polycyclic aromatic hydrocarbons some of which are known to produce skin cancer.
Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Toxicity

Other information	Aspiration of this product into the lungs can cause chemical pneumonia and can be fatal. Aspiration into the lungs can occur while vomiting after ingestion of this product. Do not siphon by mouth.
Additional information	Middle distillate: From skin-painting studies of petroleum distillates of similar composition and distillate range, it has been shown that these types of materials often possess weak carcinogenic activity in laboratory animals. In these tests, the material is painted on the shaved backs of mice twice a week for their lifetime. The material is not washed off between applications. Therefore, there may be a potential risk of skin cancer from prolonged or repeated skin contact with this product in the absence of good personal hygiene. This particular product has not been tested for carcinogenic activity, but we have chosen to be cautious in light of the findings with other distillate streams.
	Occasional skin contact with this product is not expected to have serious effects, but good personal hygiene should be practiced and repeated skin contact avoided. This product can also be expected to produce skin irritation upon prolonged or repeated skin contact. Personal hygiene measures taken to prevent skin irritation are expected to be adequate to prevent risk of skin cancer.
	Diesel exhaust particulates have been classified by the National Toxicological Program (NTP) to be a reasonably anticipated human carcinogen. Exposure should be minimized to reduce potential risk.
	Naphthalene has been reported to cause developmental toxicity in mice after oral exposure to relatively high dose levels, but developmental toxicity was not observed in NTP (National Toxicology Program) sponsored studies in rats and rabbits. Ingestion or inhalation of naphthalene can result in hemolysis and other blood abnormalities, and individuals (and infants) deficient in glucose-6-phosphate dehydrogenase may be especially susceptible to these effects. Inhalation of naphthalene exposure has been associated with cataracts in animals and humans.

Section 12. Ecological information

Product/ingredient nam&pecies

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Exposure

Effects

Remarks

Test/Result

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Fuels, diesel, No 2	Micro-organism	EL50 >1000 mg/l Nominal Fresh water	40 hours	growth inhibition	Based on Vacuum gas oil / Hydrocracked gas oil / Distillate Fuel
	Micro-organism	NOELR 3.217 mg/ I Nominal Fresh water	40 hours	growth inhibition	Based on Vacuum gas oil / Hydrocracked gas oil / Distillate Fuel
	Algae	Acute EL50 22 mg/l Nominal Fresh water	72 hours	(growth rate)	Based on Diesel fuel
	Daphnia	Acute EL50 210 mg/l Nominal Fresh water	48 hours	Mobility	Based on Diesel fuel
	Daphnia	Acute EL50 68 mg/l Nominal Fresh water	48 hours	Mobility	Based on Diesel fuel
	Algae	Acute ErL50 78 mg/l Nominal Fresh water	72 hours	(growth rate)	Based on Diesel fuel
	Fish	Acute LL50 65 mg/l Nominal Fresh water	96 hours	Mortality	Based on Diesel fuel
	Fish	Acute LL50 21 mg/l Nominal Fresh water	96 hours	Mortality	Based on Diesel fuel
	Algae	Acute NOELR 10 mg/I Nominal Fresh water	72 hours	(growth rate)	Based on Diesel fuel
	Algae	Acute NOELR 1 mg/I Nominal Fresh water	72 hours	(growth rate)	Based on Diesel fuel
	Daphnia	Acute NOELR 46 mg/l Nominal Fresh water	48 hours	Mobility	Based on Diesel fuel
	Fish	Chronic NOEL 0. 083 mg/l Nominal Fresh water	14 days	Mortality	Based on Vacuum gas oil / Hydrocracked gas oil / Distillate Fuel
	Daphnia	Chronic NOELR 0.2 mg/l Nominal Fresh water	21 days	Immobilization	Based on Vacuum gas oil / Hydrocracked gas oil / Distillate Fuel
Conclusion/Summar	y Not availa	able.			
Persistence and degra Not available.	<u>adability</u>				
Product/ingredient na	ame Test	Result		Remarks	
	s, diesel f issue 10/07/2014.	Form	Product code nat US (US)	SMF2115 Langua	Page: 11/15 ge ENGLISH (ENGLISH)

Section 12. Ecological information

	-		
Fuels, diesel, No 2	OECD 301 F	60 % - Readily - 28 days	Based on Diesel fuel
	OECD 301 F	57.5 % - Not readily - 28 days	Based on Diesel fuel
	Equivalent to EPA OTS 796. 3100	35 % - Not readily - 28 days	Based on Gas Oils (petroleum), solvent refined
Conclusion/Summary	Not available.		

Bioaccumulative potential

This product is not expected to bioaccumulate through food chains in the environment.

<u>Mobility in soil</u>	
Soil/water partition coefficient (Koc)	Not available.
Mobility	Spillages may penetrate the soil causing ground water contamination. This material may accumulate in sediments.
Other adverse effects	No known significant effects or critical hazards.
Other ecological information	Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

Section 13. Disposal considerations

Disposal methods	The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been
	inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #		Reference number
Naphthalene	91-20-3	Listed	U165

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	ΙΑΤΑ
UN number	NA 1993	UN 1202	UN1202	UN1202
UN proper shipping name	DIESEL FUEL	DIESEL FUEL	DIESEL FUEL MARINE POLLUTANT	DIESEL FUEL
namo 🗖 Jala dia	l		Product cor	SME2115

 Product name
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Section 14. Transport information

Transport hazard class(es)	Combustible liquid.	3	3	3
Packing group	Ш	Ш	Ш	Ш
Environmental hazards	No.	No.	Yes.	No.
Additional information	Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials in package sizes less than the product reportable quantity. Reportable quantity 3333.3 lbs / 1513.3 kg [464. 86 gal / 1759.7 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.	-	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules (EmS) F-E, S-E	The environmentally hazardous substance mark may appear if required by other transportation regulations.

Special precautions for user

Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Proper shipping name

MARPOL Annex 1 rules apply for bulk shipments by sea. Category: gas oils, including ship's bunkers

Product name	Fuels, diesel		Product code	SMF2115	Page: 13/15
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Section 15. Regulatory information

U.S. Federal regulations

United States inventory (TSCA 8b)

All components are listed or exempted.

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 311/312

Classification

Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements	naphthalene	91-20-3	1 - 3
Supplier notification	naphthalene	91-20-3	1 - 3

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations	
Massachusetts	The following components are listed: NAPHTHALENE
New Jersey	The following components are listed: NAPHTHALENE; MOTH FLAKES
Pennsylvania	The following components are listed: NAPHTHALENE
California Prop. 65	WARNING: This product contains a chemical known to the State of California to cause cancer. naphthalene; ethylbenzene; cumene
	WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. toluene
	WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. Benzene
	Prop 65 chemicals will result under certain conditions from the use of this material. For example, burning fuels produces combustion products including diesel exhaust, a Prop 65 carcinogen, and carbon monoxide, a Prop 65 reproductive toxin.
Other regulations	
Australia inventory (AICS)	At least one component is not listed.
Canada inventory	All components are listed or exempted.
China inventory (IECSC)	All components are listed or exempted.
Japan inventory (ENCS)	Not determined.
Korea inventory (KECI)	All components are listed or exempted.
Philippines inventory (PICCS)	At least one component is not listed.
REACH Status	For the REACH status of this product please consult your company contact, as identified in Section 1.

Product name	Fuels, diesel		Product code	SMF2115	Page: 14/15
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Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health *		2
Flammability		2
Physical hazards		0
Personal protection		

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.)



<u>History</u>	
Date of issue/Date of revision	10/07/2014.
Date of previous issue	10/03/2014.
Key to abbreviations	ACGIH = American Conference of Industrial Hygienists ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor CAS Number = Chemical Abstracts Service Registry Number GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) OEL = Occupational Exposure Limit SDS = Safety Data Sheet STEL = Short term exposure limit TWA = Time weighted average UN = United Nations UN Number = United Nations Number, a four digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods.

V Indicates information that has changed from previously issued version.

Notice to reader

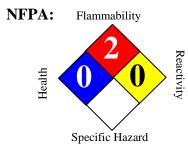
All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.

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Safety Data Sheet Diesel Low Sulfur (LSD) and Ultra Low Sulfur Diesel (ULSD)





SECTION 1. PRODUCT	AND COMPANY IDENTI	FICATION	
Product name	: Diesel Low Sulfur (LS	D) and Ultra Low Sulfur	Diesel (ULSD)
Synonyms	: CARB Diesel, 888100	004478	
MSDS Number	888100004478	Version	2.31
Product Use Description			
Company	For: Tesoro Refining & 19100 Ridgewood Par	& Marketing Co. /kway, San Antonio, TX	78259
Tesoro Call Center		Chemtrec (Emergency Contact)	(800) 424-9300
SECTION 2. HAZARDS	IDENTIFICATION		
Classifications	Flammable Liquid – Ca Skin Irritation – Catego Eye Irritation – Catego Aspiration Hazard – Ca Carcinogenicity – Cate Acute Toxicity - Inhala Chronic Aquatic Toxici	ory 2 ry 2B ategory 1 egory 2 tion – Category 4	
Pictograms			20
Signal Word	Danger		
Hazard Statements	Causes skin irritation. Causes eye irritation. Suspected of causing s Suspected of causing c over-exposure by inha	wed and enters airways – kin cancer if repeated ar cancer in the respiratory lation occurs.	- do not siphon diesel by mouth. nd prolonged skin contact occurs. system if repeated and prolonged us system by repeated and

	Toxic if inhaled. May cause drowsiness or dizziness by inhalation. Toxic to aquatic life with long lasting effects.
Precautionary statements	
Prevention	 Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, open flames, welding and hot surfaces. No smoking. Keep container tightly closed. Ground and/or bond container and receiving equipment. Use explosion-proof electrical equipment. Use only non-sparking tools if tools are used in flammable atmosphere. Take precautionary measures against static discharge. Wear gloves, eye protection and face protection as needed to prevent skin and eye contact with liquid. Wash hands or liquid-contacted skin thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid breathing vapors or mists. Use only outdoors or in a well-ventilated area.
Response	 In case of fire: Use dry chemical, CO2, water spray or fire fighting foam to extinguish. If swallowed: Immediately call a poison center, doctor, hospital emergency room, medical clinic or 911. Do NOT induce vomiting. Rinse mouth. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. If in eye: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin or eye irritation persists, get medical attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call or doctor or emergency medical provider. See Section 4 and Section 11 for medical treatment information.
Storage	Store in a well ventilated place. Keep cool. Store locked up. Keep container tightly closed. Use only approved containers.
Disposal	Dispose of contents/containers to approved disposal site in accordance with local, regional, national, and/or international regulations.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight %
Fuels, diesel, No 2; Gasoil - unspecified	68476-34-6	100%
Nonane	111-84-2	0 - 5%
Naphthalene	91-20-3	0 - 1%

1,2,4-Trimethylbenzene	95-63-6	0 - 2%
Xylene	1330-20-7	0 - 2%
Sulfur	7704-34-9	15 ppm maximum

SECTION 4. FIRST AID MEASURES			
Inhalation	: Move to fresh air. Give oxygen. If breathing is irregular or stopped, administer artificial respiration. Seek medical attention immediately.		
Skin contact	: Take off all contaminated clothing immediately. Wash off immediately with soap and plenty of water. Wash contaminated clothing before re-use. If skin irritation persists, seek medical attention immediately.		
Eye contact	: Remove contact lenses. Rinse thoroughly with plenty of water for at least 15 minutes. If symptoms persist, seek medical attention.		
Ingestion	: Do not induce vomiting without medical advice. If a person vomits when lying on his back, place him in the recovery position. Seek medical attention immediately.		
Notes to physician	: Symptoms: Dizziness, Discomfort, Headache, Nausea, Disorder, Vomiting, Lung edema, Liver disorders, Kidney disorders. Aspiration may cause pulmonary edema and pneumonitis.		

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray or fire fighting foam. LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers. Keep containers and surroundings cool with water spray.
Specific hazards during fire fighting	:	Fire Hazard Do not use a solid water stream as it may scatter and spread fire. Cool closed containers exposed to fire with water spray.
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus and protective suit. Use personal protective equipment.
Further information	:	Exposure to decomposition products may be a hazard to health. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Evacuate nonessential personnel and remove or secure all ignition sources.	
	Consider wind direction; stay upwind and uphill, if possible. Evaluate the directi	
	of product travel, diking, sewers, etc. to contain spill areas. Spills may infiltrate	
	subsurface soil and groundwater; professional assistance may be necessary to)
	determine the extent of subsurface impact. Ensure adequate ventilation. Use	
	personal protective equipment.	

Environmental precautions	:	Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection. Discharge into the environment must be avoided. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods for cleaning up	:	Take up with sand or oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal - caution, flammable vapors may accumulate in closed containers. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling	:	Keep away from fire, sparks and heated surfaces. No smoking near areas where material is stored or handled. The product should only be stored and handled in areas with intrinsically safe electrical classification.
	:	 Hydrocarbon liquids including this product can act as a non-conductive flammable liquid (or static accumulators), and may form ignitable vapor-air mixtures in storage tanks or other containers. Precautions to prevent static-initated fire or explosion during transfer, storage or handling, include but are not limited to these examples: (1) Ground and bond containers during product transfers. Grounding and bonding may not be adequate protection to prevent ignition or explosion of hydrocarbon liquids and vapors that are static accumulators. (2) Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil or diesel) is loaded into tanks previously containing low flash point products (such gasoline or naphtha). (3) Storage tank level floats must be effectively bonded. For more information on precautions to prevent static-initated fire or explosion, see NFPA 77, Recommended Practice on Static Electricity (2007), and API Recommended Practice 2003, Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents (2008).
Conditions for safe storage, including incompatibilities	:	Keep away from flame, sparks, excessive temperatures and open flame. Use approved containers. Keep containers closed and clearly labeled. Empty or partially full product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose containers to sources of ignition. Store in a well-ventilated area. The storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".
		Keep away from food, drink and animal feed. Incompatible with oxidizing agents. Incompatible with acids.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

List	Components			CAS-No.	Туре:	Value
OSHA Z1	Xylene			1330-20-7	PEL	100 ppm 435 mg/m3
	Naphthalene			91-20-3	PEL	10 ppm 50 mg/m3
ACGIH	Diesel Fuel			68476-30-2	TWA	100 mg/m3
	Xylene			1330-20-7	TWA	100 ppm
				1330-20-7	STEL	150 ppm
	Naphthalene			91-20-3	TWA	10 ppm
				91-20-3	STEL	15 ppm
	Nonane			111-84-2	TWA	200 ppm
-	ng measures	:	below o spaces classifie	occupational ex . Use only intrin ed areas.	posure and flan sically safe ele	and vapor concentrations of this product mmability limits, particularly in confined actrical equipment approved for use in
Eye prote	CTION	:		glasses or goggles are recommended where there is a possibility of ng or spraying.		
Hand prot			s constructed of nitrile, neoprene, or PVC are recommended. Consult acturer specifications for further information.			
Skin and b	body protection	:	TyCher The res	m®, Saranex or	equivalent rec	emical protective clothing such as of DuPont commended based on degree of exposure. ay vary from product to product as well as
Respirato	ry protection	:	caniste concen irritation 29 CFF manufa NIOSH potentia deficier	r may be permi trations are or r n. Protection pro 1910.134, AN cturer for additi / MSHA-approv al for uncontroll	ssible under ce nay be expecte ovided by air-p SI Z88.2-1992, onal guidance ed positive-pre ed release, exp or any other c	ing respirator with organic vapor cartridges o ertain circumstances where airborne ed to exceed exposure limits or for odor or urifying respirators is limited. Refer to OSHA , NIOSH Respirator Decision Logic, and the on respiratory protection selection. Use a essure supplied-air respirator if there is a posure levels are not known, in oxygen- circumstance where an air-purifying respirator.
Work / Hy	giene practices	:	operation practice eating, on the s product Prompt launder	ons presenting es. Avoid repea drinking, smoki skin. Do not use t from exposed ly remove conta ing to prevent t or dryer. Consi	a potential spla ated and/or pro ng, or using to solvents or ha skin areas. W aminated cloth he formation o	Id be available in the near proximity to ash exposure. Use good personal hygiene longed skin exposure. Wash hands before ilet facilities. Do not use as a cleaning solver arsh abrasive skin cleaners for washing this /aterless hand cleaners are effective. ing and launder before reuse. Use care whe f flammable vapors which could ignite via o discard contaminated leather shoes and

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

SAFETY DATA SHEET

Diesel Low Sulfur (LSD) and Ultra Low Sulfur Page 6 of 11 **Diesel (ULSD)**

1 -			
Appearance	Clear to straw colored liquid		
Odor	Characteristic petroleum or kerosene-like odor		
Odor threshold	0.1 - 1 ppm typically reported		
рН	Not applicable		
Melting point/freezing point	Gel point can be about -15°F; freezing requires laboratory conditions		
Initial boiling point & range	154 - 372 °C (310° - 702 °F)		
Flash point	38°C Minimum for #1 Diesel, 52°C Minimum for #2 Diesel		
Evaporation rate	Higher initially and declining as lighter components evaporate		
Flammability (solid, gas)	Flammable vapor released by liquid		
Upper explosive limit	6.5 %(V)		
Lower explosive limit	0.6 %(V)		
Vapor pressure	< 2 mm Hg at 20 °C		
Vapor density (air = 1)	> 4.5		
Relative density (water = 1)	0.86 g/mL		
Solubility (in water)	0.0005 g/100 mL		
Partition coefficient (n-octanol/water)	> 3.3 as log Pow		
Auto-ignition temperature	257 °C (495 °F)		
Decomposition temperature	Will evaporate or boil and possibly ignite before decomposition occurs.		
Kinematic viscosity	1 to 6 mm ² /s range reported for No.1 or No.2 diesel at ambient temperatures		
Conductivity (conductivity can be reduced by environmental factors such as a decrease in temperature	Diesel Fuel Oils at terminal load rack:At least 25 pS/mUltra Low Sulfur Diesel (ULSD) without conductivity additive:0 pS/m to 5 pS/mULSD at terminal load rack with conductivity additive:At least 50 pS/mJP-8 at terminal load rack:150 pS/m to 600 pS/m		
SECTION 10. STABILITY ANI	D REACTIVITY		
Reactivity	Vapors may form explosive mixture with air. Hazardous polymerization does not occur.		
Chemical stability	Stable under normal conditions.		
Possibility of hazardous reactions	Can react with strong oxidizing agents, peroxides, acids and alkalies. Do not use with Viton or Fluorel gaskets or seals.		
Conditions to avoid	Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Avoid static charge accumulation and discharge (see Section 7).		
Hazardous decomposition products	Ignition and burning can release carbon monoxide, carbon dioxide, non- combusted hydrocarbons (smoke) and, depending on formulation, trace amounts		
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	of sulfur	dioxide. Diesel exhaust particals may be a lung hazard (see Section 11).
SECTION 11. TOXICOL	OGICAL INFO	RMATION
Inhalation	cause sign	mists from this material can irritate the nose, throat, and lungs, and can s and symptoms of central nervous system depression, depending on the ion and duration of exposure.
Skin contact	Liquid may	on leading to dermatitis may occur upon prolonged or repeated contact. be absorbed through the skin in toxic amounts if large areas of skin are exposed. Long-term, repeated skin contact may cause skin cancer.
Eye contact	Eye irritatio	on may result from contact with liquid, mists, and/or vapors.
Ingestion	mouth, thro Aspiration ingestion.	fatal if swallowed. Do NOT induce vomiting. This material can irritate the bat, stomach, and cause nausea, vomiting, diarrhea and restlessness hazard if liquid is inhaled into lungs, particularly from vomiting after Aspiration may result in chemical pneumonia, severe lung damage, failure and even death.
Target organs	Central ne	rvous system, Eyes, Skin, Kidney, Liver
Further information	laboratory significanc studies wit soap and v Repeated IARC class (Group 1).	ve shown that similar products produce skin cancer or skin tumors in animals following repeated applications without washing or removal. The e of this finding to human exposure has not been determined. Other h active skin carcinogens have shown that washing the animal's skin with water between applications reduced tumor formation. over-exposure may cause liver and kidney injury sifies whole diesel fuel exhaust particulates as carcinogenic to humans NIOSH regards whole diesel fuel exhaust particulates and limited evidence in
Component:		
Fuels, diesel, No 2; Gasoil - unspecified	68476-34-6	<u>Acute oral toxicity:</u> LD50 rat Dose: 5,001 mg/kg <u>Acute dermal toxicity:</u> LD50 rabbit
		Dose: 2,001 mg/kg Acute inhalation toxicity: LC50 rat Dose: 7.64 mg/l Exposure time: 4 h Skin irritation: Classification: Irritating to skin. Result: Severe skin irritation Eye irritation: Classification: Irritating to eyes. Result: Mild eye irritation
Nonane	111-84-2	<u>Acute oral toxicity:</u> LD50 mouse Dose: 218 mg/kg
		<u>Acute inhalation toxicity:</u> LC50 rat Exposure time: 4 h
Naphthalene	91-20-3	<u>Acute oral toxicity:</u> LD50 rat Dose: 2,001 mg/kg
		<u>Acute dermal toxicity:</u> LD50 rat Dose: 2,501 mg/kg
		7/11

SAFETY DATA SHE	ET	Diesel Low Sulfur (LSD) and Ultra Low SulfurPage 8 of 11Diesel (ULSD)Page 8 of 11
		<u>Acute inhalation toxicity:</u> LC50 rat Dose: 101 mg/l Exposure time: 4 h
		<u>Skin irritation:</u> Classification: Irritating to skin. Result: Mild skin irritation
		<u>Eye irritation:</u> Classification: Irritating to eyes. Result: Mild eye irritation
		Carcinogenicity: N11.00422130
1,2,4-Trimethylbenzene	95-63-6	<u>Acute inhalation toxicity:</u> LC50 rat Dose: 18 mg/l Exposure time: 4 h
		<u>Skin irritation:</u> Classification: Irritating to skin. Result: Skin irritation
		<u>Eye irritation:</u> Classification: Irritating to eyes. Result: Eye irritation
Xylene	1330-20-7	<u>Acute oral toxicity:</u> LD50 rat Dose: 2,840 mg/kg
		<u>Acute dermal toxicity:</u> LD50 rabbit Dose: ca. 4,500 mg/kg
		<u>Acute inhalation toxicity:</u> LC50 rat Dose: 6,350 mg/l Exposure time: 4 h
		<u>Skin irritation:</u> Classification: Irritating to skin. Result: Mild skin irritation Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product. <u>Eye irritation:</u> Classification: Irritating to eyes. Result: Mild eye irritation
Carcinogenicity		
NTP	Naphthalene	(CAS-No.: 91-20-3)
IARC	Naphthalene	(CAS-No.: 91-20-3)
OSHA		t of this product which is present at levels greater than or equal to 0.1 $\%$ is carcinogen or potential carcinogen by OSHA.
CA Prop 65	WARNING! Th cancer.	is product contains a chemical known to the State of California to cause
	naphthalene	(CAS-No.: 91-20-3)
SECTION 12. ECOLO		ΔΤΙΟΝ

Additional ecological information	•	f sewers, drainage areas, and waterways. under Federal and State regulations.	Report spills and releases, as
Component:			
Diesel	68476-34-6	<u>Toxicity to fish:</u> LC50 Species: Jordanella floridae Dose: 54 mg/l	
		8 / 11	

Diesel Low Sulfur (LSD) and Ultra Low Sulfur Page 9 of 11 **Diesel (ULSD)**

Exposure time: 96 h

<u>Toxicity to crustacia</u>: Species: Palaemonetes pugio TLm (48 hour) = 3.4 mg/l

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal

: Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14. TRANSPORT INFORMATION

CFR		
	Proper shipping name UN-No.	: DIESEL FUEL : UN1202 (NA 1993)
	Class	: 3
	Packing group	: 111
TDG		
	Proper shipping name	: DIESEL FUEL
	UN-No.	: UN1202 (NA 1993)
	Class	: 3
	Packing group	: 111
IATA Cargo	Transport	
	UN UN-No.	: UN1202 (NA 1993)
	Description of the goods	DIESEL FUEL
	Class	: 3
	Packaging group	: 111
	ICAO-Labels	: 3
	Packing instruction (cargo aircraft)	: 366
	· · · · · · · · · · · · · · · · · · ·	: Y344
IATA Passer	nger Transport	
	UN UN-No.	: UN1202 (NA 1993)
	Description of the goods	· · · · · · · · · · · · · · · · · · ·
	Class	: 3
	Packaging group	: 111
	ICAO-Labels	: 3
	Packing instruction	: 355
	(passenger aircraft)	
	Packing instruction	: Y344
	(passenger aircraft)	
IMDG-Code		
	UN-No.	: UN 1202 (NA 1993)
	Description of the goods	: DIESEL FUEL
	Class	: 3
	Packaging group	: III

SAFETY DATA SHEET

Diesel Low Sulfur (LSD) and Ultra Low Sulfur Page 10 of 11 **Diesel (ULSD)**

EmS Number:F-E S-EMarine pollutant:No

SECTION 15. REGULATORY INFORMATION : CERCLA SECTION 103 and SRA SECTION 304 (RELEASE TO THE ENVIROMENT) The CERCLA definition of hazardous substances contains ary periodeum exclusion" thate data duitermediate) from the crade oil refining process and and products (both finished and intermediate) from the crade oil refining process and any indigenous components of such finished and intermediate) from the crade oil refining process and any indigenous components of such from the CERCLA Section 103.4, as well as the Cleam Water Act may still apply. TSCA Status : On TSCA Inventory DSL Status : All components of this product are on the Canadian DSL list. SARA 311/312 Hazards : Fire Hazard Acute Health Hazard Chronic Health Hazard SARA III US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required Components CASI-No. Xylene 1330-20-7 1,2,4-Trimethylbenzene 95-63-6 Naphthalene 91-20-3 PENN RTK US. Pennsylvania Worker and Community Right-to-Know Law (24 Pa. Code Chap. 301-323) Components CASI-No. Xylene 130-20-7 1,2,4-Trimethylbenzene 95-63-6 Maphthalene 91-20-3 PENN RTK US. Massachusetis Commonwealth's Right-to-Know L		
The CERCLA definition of hazardous substances contains a "pertoguide of into the crude excepts review of iterations of crude oil, rations of the crude reporting requirements, including SARA Section 304, as well as the Clean Water Act may still apply. TSCA Status : On TSCA Inventory DSL Status : All components of this product are on the Canadian DSL list. SARA 311/312 Hazards : Fire Hazard Acute Health Hazard Chronic Health Hazard Chronic Health Hazard Science (PGRA) SARA Title III Section 313 Toxic Chremicals (40 CFR 372.65) - Suppler Notification Required SARA III US. EPA Emergency Planning and Community Right-to-Know Act (EPCRA) SARA Title III Section 313 Toxic Chremicals (40 CFR 372.65) - Suppler Notification Required SarRA III US. EPA Emergency Planning and Community Right-to-Know Act (SPCRA) SARA Title III Section 313 Toxic Chremicals (40 CFR 372.65) - Suppler Notification Required SarRA III US. EPA Emergency Planning and Community Right-to-Know Act (SPCRA) SARA Title III Section 313 Toxic Chremicals (40 CFR 372.65) - Suppler Notification Required SarRA III US. EPA Emergency Planning and Community Right-to-Know Law (34 Pa. Code Chap. 301-323) Components GAS-No. Nonane 111-84-	SECTION 15. REGU	LATORY INFORMATION
DSL Status : All components of this product are on the Canadian DSL list. SARA 311/312 Hazards : Fire Hazard Acute Health Hazard Chronic Health Hazard SARA III US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Suppler Notification Required Components CAS-No. Xylene 1330-20-7 1,2,4-Trimethylbenzer 95-63-6 Naphthalene 91-20-3 PENN RTK US. Pennsylvania Worker and Community Right-To-Know Law (34 Pa. Code Chap. 301-323) Components CAS-No. Nonane 111-84-2 Naphthalene 91-20-3 1,2,4-Trimethylbenzer 95-63-6 Xylene 1330-20-7 Fuels, diesel, No 2; Section 670.000 330-20-7 Fuels, diesel, No 2; Sussachusetts Commonwealth's Right-To-Know Law (Appendix A to 105 Code of Massachusetts Regulation Section 670.000) Components CAS-No. Xylene 1330-20-7 Fuels, diesel, No 2; Sussachusetts Commonwealth's Right-To-Know Law (Appendix A to 105 Code of Massachusetts Regulation Section 670.000) Components CAS-No. Xylene 1330-20-7 1,2,4-Trimethylbenzer 95-63-6		The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil. Fractions of crude oil, and products (both finished and intermediate) from the crude oil refining process and any indigenous components of such from the CERCLA Section 103 reporting requirements. However, other federal reporting requirements, including SARA Section 304, as well as
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ComponentsCAS-No.Nonane111-84-2Naphthalene91-20-31,2,4-Trimethylbenzene95-63-6xylene1330-20-7Fuels, diesel, No 2; Gasoil - unspecified68476-34-6MASS RTKUS. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)ComponentsCAS-No.Xylene1330-20-71,2,4-Trimethylbenzene95-63-6Naphthalene91-20-3Nonane111-84-2NJ RTKUS. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)ComponentsCAS-No.	Naphthalene	91-20-3
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Fuels, diesel, No 2; Gasoil - unspecified68476-34-6MASS RTKUS. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)ComponentsCAS-No.Xylene1330-20-71,2,4-Trimethylbenzene95-63-6Naphthalene91-20-3Nonane111-84-2NJ RTKUS. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)ComponentsCAS-No.	1,2,4-Trimethylbenzene	95-63-6
MASS RTKUS. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)ComponentsCAS-No.Xylene1330-20-71,2,4-Trimethylbenzene95-63-6Naphthalene91-20-3Nonane111-84-2NJ RTKUS. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)ComponentsCAS-No.	xylene	1330-20-7
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Xylene1330-20-71,2,4-Trimethylbenzene95-63-6Naphthalene91-20-3Nonane111-84-2NJ RTKUS. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)ComponentsCAS-No.	MASS RTK	
1,2,4-Trimethylbenzene95-63-6Naphthalene91-20-3Nonane111-84-2NJ RTKUS. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)ComponentsCAS-No.	<u>Components</u>	<u>CAS-No.</u>
Naphthalene 91-20-3 Nonane 111-84-2 NJ RTK US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5) Components CAS-No.	Xylene	1330-20-7
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NJ RTK US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5) Components CAS-No.	Naphthalene	91-20-3
<u>Components</u> <u>CAS-No.</u>	Nonane	111-84-2
	NJ RTK	US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)
Nonane 111-84-2	<u>Components</u>	CAS-No.
	Nonane	111-84-2

SAFETY DATA SHEET		Diesel Low Sulfur (LSD) and Ultra Low Sulfur Page 11 of Diesel (ULSD)	11
Naphthalene		91-20-3	
1,2,4-Trimethylbenzene		95-63-6	
Xylene		1330-20-7	
Fuels, diesel, No 2; Gasoil -	unspecified	68476-34-6	
California Prop. 65	: WARNING! This cause cancer.	s product contains a chemical known to the State of California to	
	Naphthalene	91-20-3	

SECTION 16. OTHER INFORMATION

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

10/29/2012

1153, 1250, 1443, 1454, 1814, 1815, 1866, 1925



SAFETY DATA SHEET



MAPP GAS (Petroleum Gas, MAPD)

Section 1. Identification

GHS product identifier	: MAPP GAS (Petroleum Gas, MAPD)
Other means of identification	: MAP,MAPP,Methylacetylene-Propadiene, Mixture of Methylacetylene and Propadiene
Product use	: Synthetic/Analytical chemistry.
Synonym SDS #	 MAP,MAPP,Methylacetylene-Propadiene, Mixture of Methylacetylene and Propadiene 002015
Supplier's details	: Airgas USA, LLC and its affiliates 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253
24-hour telephone	: 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	: FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Liquefied gas
GHS label elements	
Hazard pictograms	
Signal word	: Danger
Hazard statements	 Extremely flammable gas. May form explosive mixtures with air. Contains gas under pressure; may explode if heated. May cause frostbite. May displace oxygen and cause rapid suffocation.
Precautionary statements	
General	: Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction. Always keep container in upright position. Approach suspected leak area with caution.
Prevention	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Response	 Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.
Storage	: Protect from sunlight when ambient temperature exceeds 52°C/125°F. Store in a well- ventilated place.
Disposal	: Not applicable.
Hazards not otherwise classified	: Liquid can cause burns similar to frostbite.

Section 3. Composition/information on ingredients

: Mixture

Substance/mixture

Other means of identification

: MAP, MAPP, Methylacetylene-Propadiene, Mixture of Methylacetylene and Propadiene

CAS number/other identifiers

CAS number	: Not applicable.
Product code	: 002015

Ingredient name	%	CAS number
propylene	40 - 50	115-07-1
methyl acetylene	27 - 33	74-99-7
1,2-propadiene	13 - 15	463-49-0
Propane	1 - 5	74-98-6
N-Butane	2 - 5	106-97-8
isobutane	2 - 5	75-28-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Becomption of needood	
Eye contact	 Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it. Get medical attention if symptoms occur. In case of contact with liquid, warm frozen tissues slowly with lukewarm water and get medical attention. Do not rub affected area. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if adverse health effects persist or are severe. Ingestion of liquid can cause burns similar to frostbite. If frostbite occurs, get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. As this product rapidly becomes a gas when released, refer to the inhalation section.

Most important symptoms/effects, acute and delayed

Potential acute health eff	iects						
Eye contact	: Liquid ca	in cause burns similar to fro	stbite.				
Inhalation	: No know	: No known significant effects or critical hazards.					
Skin contact	: Dermal of frostbite.	contact with rapidly evapora	ting liquid could result in f	reezing of	the tissue	s or	
Frostbite	: Try to wa	arm up the frozen tissues ar	nd seek medical attention.				
Ingestion	: Ingestion	n of liquid can cause burns s	similar to frostbite.				
Over-exposure signs/syn	<u>nptoms</u>						
Date of issue/Date of revision	: 7/1/2016	Date of previous issue	: No previous validation	Version	: 0.01	2/12	

Section 4. First aid measures

Eye contact	: Adverse symptoms may include the following:, frostbite
Inhalation	: No specific data.
Skin contact	: Adverse symptoms may include the following:, frostbite
Ingestion	: Adverse symptoms may include the following:, frostbite
Indication of immediate	medical attention and special treatment needed, if necessary
Notes to physician	: Treat symptomatically. Contact poison treatment specialist immediately if large

	quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. It may
	be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fig	hting measures
Extinguishing media	
Suitable extinguishing media	: Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: None known.
Specific hazards arising from the chemical	: Contains gas under pressure. Extremely flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide
Special protective actions for fire-fighters	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk. If this is impossible, withdraw from area and allow fire to burn. Fight fire from protected location or maximum possible distance. Eliminate all ignition sources if safe to do so.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. For incidents involving large quantities, thermally insulated undergarments and thick textile or leather gloves should be worn.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures			
For non-emergency personnel	Accidental releases pose a serious fire or explosion hazard. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.		
For emergency responders	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".		

Section 6. Accidental release measures

Environmental precautions	: Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill	:	Immediately contact emergency personnel. tools and explosion-proof equipment.	Stop leak if without risk. Use spark-proof
Large spill	:	Immediately contact emergency personnel. tools and explosion-proof equipment. Note information and Section 13 for waste dispos	see Section 1 for emergency contact

Section 7. Handling and storage

Precautions for safe handling

Control parameters

Protective measures	:	Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Do not get in eyes or on skin or clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.
Advice on general occupational hygiene	:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	:	Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Eliminate all ignition sources. Keep container tightly closed and sealed until ready for use. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

Section 8. Exposure controls/personal protection

Occupational exposure limit	its		
propylene			ACGIH TLV (United States, 1/2005).
			TWA: 500 ppm 8 hours. Form: All forms
			ACGIH TLV (United States, 3/2012).
			TWA: 500 ppm 8 hours.
methyl acetylene			ACGIH TLV (United States, 3/2012).
			TWA: 1640 mg/m³ 8 hours.
			TWA: 1000 ppm 8 hours.
			NIOSH REL (United States, 1/2013).
			TWA: 1650 mg/m³ 10 hours.
			TWA: 1000 ppm 10 hours.
			OSHA PEL (United States, 6/2010).
			TWA: 1650 mg/m ³ 8 hours.
			TWA: 1000 ppm 8 hours.
			OSHA PEL 1989 (United States, 3/1989).
			TWA: 1650 mg/m³ 8 hours.
			TWA: 1000 ppm 8 hours.
1,2-propadiene			None.
Propane			NIOSH REL (United States, 10/2013).
Date of issue/Date of revision	: 7/1/2016	Date of previous issue	: No previous validation Version : 0.01 4/12

Section 8. Exposure controls/personal protection

	TWA: 1800 mg/m ³ 10 hours. TWA: 1000 ppm 10 hours. OSHA PEL (United States, 2/2013). TWA: 1800 mg/m ³ 8 hours. TWA: 1000 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989) TWA: 1800 mg/m ³ 8 hours.).
N-Butane	TWA: 1000 ppm 8 hours. NIOSH REL (United States, 10/2013). TWA: 1900 mg/m ³ 10 hours. TWA: 800 ppm 10 hours. OSHA PEL 1989 (United States, 3/1989) TWA: 1900 mg/m ³ 8 hours. TWA: 800 ppm 8 hours.).
isobutane	ACGIH TLV (United States, 3/2015). STEL: 1000 ppm 15 minutes. NIOSH REL (United States, 4/2013). TWA: 1900 mg/m ³ 10 hours. TWA: 800 ppm 10 hours. ACGIH TLV (United States, 6/2013). STEL: 1000 ppm 15 minutes.	
Appropriate engineering controls	: Use only with adequate ventilation. Use process enclosures, local exhaust ventilat other engineering controls to keep worker exposure to airborne contaminants below recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-prooventilation equipment.	w any
Environmental exposure controls	: Emissions from ventilation or work process equipment should be checked to ensur they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipme will be necessary to reduce emissions to acceptable levels.	9
Individual protection measu	25	
Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing Wash contaminated clothing before reusing. Ensure that eyewash stations and sa showers are close to the workstation location.	g.
Eye/face protection	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unlet the assessment indicates a higher degree of protection: safety glasses with side-shields.	
Skin protection		
Hand protection	: Chemical-resistant, impervious gloves complying with an approved standard should worn at all times when handling chemical products if a risk assessment indicates the necessary. If contact with the liquid is possible, insulated gloves suitable for low temperatures should be worn. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material be different for different glove manufacturers. In the case of mixtures, consisting or several substances, the protection time of the gloves cannot be accurately estimated.	nis is may of
Body protection	: Personal protective equipment for the body should be selected based on the task to performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear a static protective clothing. For the greatest protection from static discharges, clothir should include anti-static overalls, boots and gloves.	nti-
Other skin protection	: Appropriate footwear and any additional skin protection measures should be select based on the task being performed and the risks involved and should be approved specialist before handling this product.	
Date of issue/Date of revision	7/1/2016 Date of previous issue : No previous validation Version : 0.01	5/12

Section 8. Exposure controls/personal protection

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Respiratory protection
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: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

<u>Appearance</u>		
Physical state	:	Gas. [Liquefied gas]
Color	:	Not available.
Molecular weight	:	42 g/mol
Melting/freezing point		-102.7°C (-152.9°F) This is based on data for the following ingredient: Methyl Acetylene. Weighted average: -151.39°C (-240.5°F)
Critical temperature	1	Lowest known value: 91.85°C (197.3°F) (propylene).
Odor	:	Not available.
Odor threshold	1	Not available.
рН	1	Not available.
Flash point	1	Not available.
Burning time	1	Not applicable.
Burning rate	:	Not applicable.
Evaporation rate	1	Not available.
Flammability (solid, gas)	1	Not available.
Lower and upper explosive (flammable) limits		Lower: 2% Upper: 13%
Vapor pressure	1	Not available.
Vapor density	1	Highest known value: 2.1 (Air = 1) (Butane). Weighted average: 1.52 (Air = 1)
Gas Density (lb/ft ³)	1	Weighted average: 0.11
Relative density	:	Not applicable.
Solubility	:	Not available.
Solubility in water	1	Not available.
Partition coefficient: n- octanol/water	1	Not available.
Auto-ignition temperature	1	Not available.
Decomposition temperature	:	Not available.
SADT	:	Not available.
Viscosity	:	Not applicable.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Hazardous reactions or instability may occur under certain conditions of storage or use.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	: Oxidizers

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Section 10. Stability and reactivity

Hazardous decomposition : Under normal conditions of storage and use, hazardous decomposition products should products not be produced.

Hazardous polymerization : May Occur.

> Conditions to Avoid: Elevated tempertures and pressures. Polymerization catalysts, such as metal alkyls, can cause uncontrolled polymerization. Contamination with oxygen can cause propadiene to form hazardous peroxides.

INHIBITORS/STABILIZERS

An ihibitor is added to the MAPD mixture to prevent potential unstable peroxide formation. Butanes (iso and/or normal) are also added to the MAPD mixture to prevent potential concentration of the methylacetylene and propadiene from reaching concentration levels that would render the mixture unstable in case of weathering off (evaporation of light components).

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
	LC50 Inhalation Vapor LC50 Inhalation Vapor		658000 mg/m³ 658000 mg/m³	4 hours 4 hours
			gg	

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
propylene	-	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure) Not available.

Aspiration hazard

Not available.

Information on the likely : Not available. routes of exposure

Section 11. Toxicological information

		5
Potential acute health effects	2	
Eye contact	1	Liquid can cause burns similar to frostbite.
Inhalation	:	No known significant effects or critical hazards.
Skin contact	:	Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.
Ingestion	:	Ingestion of liquid can cause burns similar to frostbite.
Symptoms related to the phy	sic	al, chemical and toxicological characteristics
Eye contact	1	Adverse symptoms may include the following:, frostbite
Inhalation	1	No specific data.
Skin contact	:	Adverse symptoms may include the following:, frostbite
Ingestion	:	Adverse symptoms may include the following:, frostbite
Delayed and immediate effect	:ts	and also chronic effects from short and long term exposure
<u>Short term exposure</u>		
Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.
Long term exposure		
Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.
Potential chronic health effe	ect	<u>s</u>
Not available.		
General	:	No known significant effects or critical hazards.
Carcinogenicity	1	No known significant effects or critical hazards.
Mutagenicity	1	No known significant effects or critical hazards.
Teratogenicity	1	No known significant effects or critical hazards.
Developmental effects	1	No known significant effects or critical hazards.
Fertility effects	:	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogPow	BCF	Potential
propylene	1.77	-	low
methyl acetylene	0.94	-	low
1,2-propadiene	1.45	-	low
Propane	1.09	-	low
N-Butane	2.89	-	low
isobutane	2.8	-	low

Mobility in soil

Soil/water partition	: Not available.
coefficient (Koc)	

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty Airgas-owned pressure vessels should be returned to Airgas. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	ΙΑΤΑ
UN number	UN1060	UN1060	UN1060	UN1060	UN1060
UN proper shipping name	Methyl Acetylene and Propadiene mixtures, stabilized	Methyl Acetylene and Propadiene mixtures, stabilized	Methyl Acetylene and Propadiene mixtures, stabilized	Methyl Acetylene and Propadiene mixtures, stabilized	Methyl Acetylene and Propadiene mixtures, stabilized
Transport hazard class(es)	2.1	2.1	2.1	2.1	2.1
Packing group	-	-	-	-	-
Environment	No.	No.	No.	No.	No.
Additional information	-	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2). Explosive Limit and	-	-	-
		Limited Quantity Index 0.125 ERAP Index			
		3000			
		Passenger Carrying Road or Rail Index Forbidden			

Section 14. Transport information

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

 Special precautions for user
 : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

 Transport in bulk according
 : Not available.

to Annex II of MARPOL 73/78 and the IBC Code

Section 15. Regulatory information

U							
J.S. Federal regulations	:	TSCA 8(a) CDR Exer	npt/Parti	al exemption	: Not determir	ned	
		United States invent	ory (TSC	A 8b): All cor	mponents are	listed or exemp	oted.
		Clean Air Act (CAA) Acetylene; 1,2-Propac	-			es: propylene;	Methyl
Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)	1	Not listed					
Clean Air Act Section 602 Class I Substances	:	Not listed					
Clean Air Act Section 602 Class II Substances	:	Not listed					
DEA List I Chemicals (Precursor Chemicals)	:	Not listed					
DEA List II Chemicals (Essential Chemicals)	:	Not listed					
SARA 302/304							
Composition/information	<u>on</u> i	ngredients					
No products were found.							
SARA 304 RQ	:	Not applicable.					
SARA 311/312							
Classification	:	Fire hazard Sudden release of pre	essure				
Composition/information	<u>on</u> i	ngredients					
Name		%	Fire hazard	Sudden release of	Reactive	Immediate (acute)	Delayed (chronic)

Name	%	-	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
propylene	40 - 50	Yes.	Yes.	No.	No.	No.
methyl acetylene	27 - 33	Yes.	Yes.	No.	No.	No.
1,2-propadiene	13 - 15	Yes.	Yes.	No.	No.	No.
Propane	1 - 5	Yes.	Yes.	No.	No.	No.
N-Butane	2 - 5	Yes.	Yes.	No.	No.	No.
isobutane	2 - 5	Yes.	Yes.	No.	No.	No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	propylene	115-07-1	40 - 50
Supplier notification	propylene	115-07-1	40 - 50

Section 15. Regulatory information

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

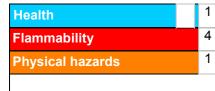
State regulations	
Massachusetts	 The following components are listed: PROPYLENE (PROPENE); PROPYNE; ISOBUTANE; BUTANE; PROPANE
New York	: None of the components are listed.
New Jersey	: The following components are listed: PROPYLENE; 1-PROPENE; METHYL ACETYLENE; 1-PROPYNE; PROPADIENE; 1,2-PROPADIENE; Isobutane; PROPANE, 2-METHYL-; BUTANE; PROPANE
Pennsylvania	 The following components are listed: 1-PROPENE; 1-PROPYNE; PROPANE, 2-METHYL-; BUTANE; PROPANE
International regulations	
International lists	
National inventory	
Australia	: All components are listed or exempted.
Canada	: All components are listed or exempted.
China	: Not determined.
Europe	: All components are listed or exempted.
Japan	: All components are listed or exempted.
Malaysia	: Not determined.
New Zealand	: All components are listed or exempted.
Philippines	: All components are listed or exempted.
Republic of Korea	: All components are listed or exempted.
Taiwan	: Not determined.
<u>Canada</u>	
WHMIS (Canada)	: Class B1: Flammable Gases Class A: Compressed Gas
	CEPA DSL: Propylene; Isobutane; Butane; propadiene; Methyl Acetylene; Propane CPR Compliance: This product has been classified with a hazard criteria of the CPR, and the MSDS contains all the information required for CPR.

Section 16. Other information

Canada Label requirements : Class B1: Flammable Gases

Class A: Compressed Gas

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



Section 16. Other information

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification		Justification
Flam. Gas 1, H220 Press. Gas Liq. Gas, H280		Expert judgment Expert judgment
<u>History</u>		
Date of printing	: 7/1/2016	
Date of issue/Date of revision	: 7/1/2016	
Date of previous issue	: No previous validation	
Version	: 0.01	
Key to abbreviations	IATA = International Air Tr IBC = Intermediate Bulk C IMDG = International Mari LogPow = logarithm of the MARPOL 73/78 = Internat	actor ed System of Classification and Labelling of Chemicals ansport Association ontainer
References	: Not available.	

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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Section G

#5

SAFETY DATA SHEET



Propane

Section 1. Identification

GHS product identifier	: Propane
Chemical name	: propane
Other means of identification	 Propyl hydride; n-Propane; Dimethyl methane; Bottled gas; propane in gaseous state; propane liquefied, n-Propane; Dimethylmethane; Freon 290; Liquefied petroleum gas; Lpg; Propyl hydride; R 290; C3H8; UN 1075; UN 1978; A-108; Hydrocarbon propellant.
Product use	: Synthetic/Analytical chemistry.
Synonym	 Propyl hydride; n-Propane; Dimethyl methane; Bottled gas; propane in gaseous state; propane liquefied, n-Propane; Dimethylmethane; Freon 290; Liquefied petroleum gas; Lpg; Propyl hydride; R 290; C3H8; UN 1075; UN 1978; A-108; Hydrocarbon propellant.
SDS #	: 001045
Supplier's details	: Airgas USA, LLC and its affiliates 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253
24-hour telephone	: 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the	: FLAMMABLE GASES - Category 1
substance or mixture	GASES UNDER PRESSURE - Liquefied gas
GHS label elements	
Hazard pictograms	
Signal word	: Danger
Hazard statements	 Extremely flammable gas. Contains gas under pressure; may explode if heated. May cause frostbite. May form explosive mixtures in Air. May displace oxygen and cause rapid suffocation.
Precautionary statements	
General	: Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction. Always keep container in upright position. Approach suspected leak area with caution.
Prevention	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Response	 Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.
Storage	 Protect from sunlight when ambient temperature exceeds 52°C/125°F. Store in a well- ventilated place.
Date of issue/Date of revision	: 10/20/2015 Date of previous issue : No previous validation Version : 0.01 1/12

Section 2. Hazards identification

Disposal	1	Not applicable.
Hazards not otherwise classified		In addition to any other important health or physical hazards, this product may displace oxygen and cause rapid suffocation.

Section 3. Composition/information on ingredients

Substance/mixture	: Substance
Chemical name	: propane
Other means of identification	 Propyl hydride; n-Propane; Dimethyl methane; Bottled gas; propane in gaseous state; propane liquefied, n-Propane; Dimethylmethane; Freon 290; Liquefied petroleum gas; Lpg; Propyl hydride; R 290; C3H8; UN 1075; UN 1978; A-108; Hydrocarbon propellant.

CAS number/other identifiers		
CAS number	:	74

CAS number	: 74-98-6		
Product code	: 001045		
Ingredient name		%	CAS number
Propane		100	74-98-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	 Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	: Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	: As this product is a gas, refer to the inhalation section.
Potential acute health	ms/effects, acute and delayed
Eye contact	: No known significant effects or critical hazards.
•	C C C C C C C C C C C C C C C C C C C
Inhalation	: No known significant effects or critical hazards.
Skin contact	: No known significant effects or critical hazards.
Frostbite	: Try to warm up the frozen tissues and seek medical attention.
Ingestion	: As this product is a gas, refer to the inhalation section.
Over-exposure signs/s	ymptoms
Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.

Ingestion

Section 4. First aid measures

: No specific data.

Indication of immediate me	ical attention and special treatment needed, if necessary	
Notes to physician	 Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. 	
Specific treatments	: No specific treatment.	
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. It m be dangerous to the person providing aid to give mouth-to-mouth resuscitation.	ay

See toxicological information (Section 11)

Section 5. Fire-fighting measures		
Extinguishing media		
Suitable extinguishing media	: Use an extinguishing agent suitable for the surrounding fire.	
Unsuitable extinguishing media	: None known.	
Specific hazards arising from the chemical	: Contains gas under pressure. Extremely flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.	
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide	
Special protective actions for fire-fighters	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk. If this is impossible, withdraw from area and allow fire to burn. Fight fire from protected location or maximum possible distance. Eliminate all ignition sources if safe to do so.	
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.	

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	Accidental releases pose a serious fire or explosion hazard. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	:	Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods and materials for co	ont	ainment and cleaning up
Small spill	1	Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof

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tools and explosion-proof equipment.

Section 6. Accidental release measures

Large spill

: Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling	L	
Protective measures	:	Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.
Advice on general occupational hygiene	:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	:	Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Eliminate all ignition sources. Keep container tightly closed and sealed until ready for use. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Exposure limits
NIOSH REL (United States, 10/2013). TWA: 1800 mg/m³ 10 hours. TWA: 1000 ppm 10 hours. OSHA PEL (United States, 2/2013). TWA: 1800 mg/m³ 8 hours. TWA: 1000 ppm 8 hours. TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours. TWA: 1800 ppm 8 hours. TWA: 1800 ppm 8 hours. TWA: 1800 ppm 8 hours.

Appropriate engineering controls	: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
Environmental exposure controls	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

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Section 8. Exposure controls/personal protection

•	
Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
Skin protection	
Hand protection	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Body protection	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
Other skin protection	 Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

<u>Appearance</u>		
Physical state	Gas. [Liquefied compressed gas.]	
Color	Colorless.	
Molecular weight	44.11 g/mole	
Molecular formula	C3-H8	
Boiling/condensation point	-161.48°C (-258.7°F)	
Melting/freezing point	-187.6°C (-305.7°F)	
Critical temperature	96.55°C (205.8°F)	
Odor	Odorless.BUT MAY HAVE SKUNK ODOR ADDED.	
Odor threshold	Not available.	
рН	Not available.	
Flash point	Closed cup: -104°C (-155.2°F) Open cup: -104°C (-155.2°F)	
Burning time	Not applicable.	
Burning rate	Not applicable.	
Evaporation rate	Not available.	
Flammability (solid, gas)	Extremely flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and oxidizing materials.	
Lower and upper explosive (flammable) limits	Lower: 1.8% Upper: 8.4%	
Vapor pressure	: 109 (psig)	
Vapor density	1.6 (Air = 1)	

Date of issue/Date of revision

Section 9. Physical and chemical properties

: 8.6206		
: 0.116 (25°C / 77 to °F)		
: Not applicable.		
: Not available.		
: 0.0244 g/l		
: 1.09		
: 287°C (548.6°F)		
: Not available.		
: Not available.		
: Not applicable.		

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	: Oxidizers
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

IDLH

: 2100 ppm

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Section 11. Toxicological information

		5
Specific target organ toxicit Not available.	t y (<u>single exposure)</u>
Specific target organ toxicit Not available.	t <u>y (</u>	repeated exposure)
Aspiration hazard Not available.		
Information on the likely routes of exposure	:	Not available.
Potential acute health effects	5	
Eye contact	:	No known significant effects or critical hazards.
Inhalation	:	No known significant effects or critical hazards.
Skin contact	:	No known significant effects or critical hazards.
Ingestion	1	As this product is a gas, refer to the inhalation section.
Symptoms related to the phy	<u>sic</u>	al, chemical and toxicological characteristics
Eye contact	1	No specific data.
Inhalation	1	No specific data.
Skin contact	4	No specific data.
Ingestion	:	No specific data.
Delayed and immediate effect	ts :	and also chronic effects from short and long term exposure
Short term exposure Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.
Long term exposure		
Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.
Potential chronic health eff	ect	<u>s</u>
Not available.		
General	:	No known significant effects or critical hazards.
Carcinogenicity	:	No known significant effects or critical hazards.
Mutagenicity	:	No known significant effects or critical hazards.
Teratogenicity	:	No known significant effects or critical hazards.
Developmental effects	:	No known significant effects or critical hazards.
Fertility effects	:	No known significant effects or critical hazards.
Numerical measures of toxic	<u>ity</u>	

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Propane	1.09	-	low

Mobility in soil

Soil/water partition	: Not available.
coefficient (Koc)	

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods	: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty Airgas-owned pressure vessels should be returned to Airgas. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.
	container.

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	UN1978	UN1978	UN1978	UN1978	UN1978
UN proper shipping name	PROPANE	PROPANE	PROPANE	PROPANE	PROPANE
Transport hazard class(es)	2.1	2.1	2.1	2.1	2.1
Packing group	-	-	-	-	-
Environment	No.	No.	No.	No.	No.
Additional information	Limited quantity Yes. Packaging instruction Passenger aircraft Quantity limitation: Forbidden.	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2). Explosive Limit and	-	-	Passenger and Carge AircraftQuantity limitation: 0 Forbidden Cargo Aircraft Only Quantity limitation: 150 kg
	Cargo aircraft Quantity limitation: 150 kg Special provisions 19, T50	Limited Quantity Index 0.125 ERAP Index 3000			

Propane

Section 14. Transport information

Passenger Carrying Ship Index 65
Passenger Carrying Road or Rail Index Forbidden
Special provisions 29, 42

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according	1	Not available.
to Annex II of MARPOL		
73/78 and the IBC Code		

Section 15. Regulatory information

0							
J.S. Federal regulations	: Т	SCA 8(a) CDR Exer	npt/Parti	ial exemption	: Not determir	ned	
	U	nited States invent	ory (TSC	CA 8b): This m	naterial is liste	d or exempted.	
	С	lean Air Act (CAA)	112 regu	lated flamma	able substand	es : propane	
Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)	: N	lot listed					
Clean Air Act Section 602 Class I Substances	: N	lot listed					
Clean Air Act Section 602 Class II Substances	: N	lot listed					
DEA List I Chemicals (Precursor Chemicals)	: N	lot listed					
DEA List II Chemicals (Essential Chemicals)	: N	lot listed					
SARA 302/304							
Composition/information	on ing	gredients					
No products were found.							
SARA 304 RQ	: N	lot applicable.					
<u>SARA 311/312</u>							
Classification		ire hazard udden release of pre	essure				
Composition/information	on ing	gredients					
Name		%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Propane		100	Yes.	Yes.	No.	No.	No.

State regulations

New York

Ma	ssa	chus	etts

- : This material is listed.
- : This material is not listed.

Section 15. Regulatory information

3	
New Jersey	: This material is listed.
Pennsylvania	: This material is listed.
International regulations	
International lists	
National inventory	
Australia	: This material is listed or exempted.
Canada	: This material is listed or exempted.
China	: This material is listed or exempted.
Europe	: This material is listed or exempted.
Japan	: This material is listed or exempted.
Malaysia	: This material is listed or exempted.
New Zealand	: This material is listed or exempted.
Philippines	: This material is listed or exempted.
Republic of Korea	: This material is listed or exempted.
Taiwan	: This material is listed or exempted.
<u>Canada</u>	
WHMIS (Canada)	: Class A: Compressed gas. Class B-1: Flammable gas.
	 CEPA Toxic substances: This material is not listed. Canadian ARET: This material is not listed. Canadian NPRI: This material is listed. Alberta Designated Substances: This material is not listed. Ontario Designated Substances: This material is not listed. Quebec Designated Substances: This material is not listed.

Section 16. Other information

Canada Label requirements	:	Class A: Compressed gas.
		Class B-1: Flammable gas.

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Section 16. Other information

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Class	ification	Justification
Flam. Gas 1, H220 Press. Gas Liq. Gas, H280		Expert judgment Expert judgment
<u>History</u> Date of printing Date of issue/Date of revision	: 10/20/2015 : 10/20/2015	
Date of previous issue	: No previous validation	
Version	: 0.01	
Key to abbreviations	IATA = International Air Tra IBC = Intermediate Bulk Co IMDG = International Mariti LogPow = logarithm of the MARPOL 73/78 = Internatio	ctor d System of Classification and Labelling of Chemicals insport Association intainer
References	: Not available.	
Indicates information that	t has changed from previously	<i>issued version.</i>
Other special considerations	radioactive materials". Altho MSDS do not present any of the potential for Radon dau source of their product streat which can be a contaminant to be concentrated in Lique similar boiling point range. I small amounts of Radon-22 "daughters". The actual cor delivered product is depend storage time prior to deliver units) may accumulate sign radiation reading during ope any pipe valve or vessel con deposits of radioactive mate wall. Field studies reported workers to cumulative expo emitting gamma radiation s emitting decay products wh equipment such as coverall efficiency particulates and r entering a vessel or working contamination, ingestion, of	ven to call attention to the issue of "Naturally occurring bugh Radon-222 levels in the product represented by this direct Radon exposure hazard, customers should be aware of ghter build up within their processing systems, whatever the ams. Radon-222 is a naturally occurring radioactive gas it in natural gas. During subsequent processing , Radon tends fied Petroleum Gas streams and in product streams having a Industry experience has shown that this product may contain 22 and its radioactive decay products, called Radon neentration of Radon-222 and radioactive daughters in the dent on the geographical source of the natural gas and ry. Process equipment (i.e. lines, filters, pumps and reaction ificant levels of radioactive daughters and show a gamma eration. A potential external radiation hazard exists at or near ntaining a Radon enriched stream, or containing internal erial due to the transmission of gamma radiation through its in the literature have not shown any conditions that subject psures in excess of general population limits. Equipment hould be presumed to be internally contaminated with alpha ich may be a hazard if inhaled or ingested. Protective Is, gloves, and respirator (NIOSH/MHSA approved for high radionuclides, or supplied air) should be worn by personnel g on contaminated process equipment to prevent skin r inhalation of any residues containing alpha radiation. y be minimized by handling scale and/or contaminated

Notice to reader

Section 16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



SAFETY DATA SHEET



Acetylene

Section 1. Identification

GHS product identifier	: Acetylene
Chemical name	: acetylene
Other means of identification	: Ethyne; Ethine; Narcylen; C2H2; Acetylen; UN 1001; Vinylene
Product use	: Synthetic/Analytical chemistry.
Synonym	: Ethyne; Ethine; Narcylen; C2H2; Acetylen; UN 1001; Vinylene
SDS #	: 001001
Supplier's details	: Airgas USA, LLC and its affiliates 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253
24-hour telephone	: 1-866-734-3438

Section 2. Hazards identification

	3 Identification
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	: FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas
GHS label elements	
Hazard pictograms	
Signal word	: Danger
Hazard statements	: Extremely flammable gas. May form explosive mixtures with air. Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation.
Precautionary statements	
General	: Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Fusible plugs in top, bottom, or valve melt at 98°C to 107°C (208°F to 224°F). Do not discharge at pressures above 15psig (103kpa). Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction. Approach suspected leak area with caution.
Prevention	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Response	: Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.
Storage	: Protect from sunlight when ambient temperature exceeds 52°C/125°F. Store in a well- ventilated place.
Disposal	: Not applicable.
Hazards not otherwise classified	: In addition to any other important health or physical hazards, this product may displace oxygen and cause rapid suffocation.

Date of issue/Date of revision

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Section 3. Composition/information on ingredients

Substance/mixture	: Substance
Chemical name	: acetylene
Other means of identification	: Ethyne; Ethine; Narcylen; C2H2; Acetylen; UN 1001; Vinylene

CAS number/other identifiers

CAS number	: 74-86-2
Product code	: 001001

Ingredient name	%	CAS number
acetylene	100	74-86-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures			
Eye contact	 Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs. 		
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.		
Skin contact	: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.		
Ingestion	: As this product is a gas, refer to the inhalation section.		

Most important symptoms/effects, acute and delayed

Potential acute health	<u>i effects</u>	
Eye contact	: Contact with rapidly expanding gas may cause burns or frostbite.	
Inhalation	: No known significant effects or critical hazards.	
Skin contact	: Contact with rapidly expanding gas may cause burns or frostbite.	
Frostbite	: Try to warm up the frozen tissues and seek medical attention.	
Ingestion	: As this product is a gas, refer to the inhalation section.	
Over-exposure signs/	/symptoms	
Eye contact	: No specific data.	
Inhalation	: No specific data.	
Skin contact	: No specific data.	
Ingestion	: No specific data.	
Indication of immediate medical attention and special treatment needed, if necessary		
Notes to physician	 Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. 	
Specific treatments	: No specific treatment.	

Date of issue/Date of revision

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Section 4. First aid measures

Protection of first-aiders

: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fig	hting measures
Extinguishing media	
Suitable extinguishing media	: Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: None known.
Specific hazards arising from the chemical	: Contains gas under pressure. Extremely flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide
Special protective actions for fire-fighters	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk. If this is impossible, withdraw from area and allow fire to burn. Fight fire from protected location or maximum possible distance. Eliminate all ignition sources if safe to do so.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
• • • • • •	

Section 6. Accidental release measures

Personal precautions, protec	<u>tiv</u>	e equipment and emergency procedures
For non-emergency personnel	:	Accidental releases pose a serious fire or explosion hazard. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	:	Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods and materials for containment and cleaning up		
Small spill	:	Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.
Large spill	:	Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. Note: see Section 1 for emergency contact

information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling	1	
Protective measures	:	Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.
Advice on general occupational hygiene	:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	:	Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Eliminate all ignition sources. Keep container tightly closed and sealed until ready for use. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name		Exposure limits		
acetylene		NIOSH REL (United States, 10/2013). CEIL: 2662 mg/m ³ CEIL: 2500 ppm		
Appropriate engineering controls	other engineering controls to recommended or statutory li	tilation. Use process enclosures, local exhaust ventilation or b keep worker exposure to airborne contaminants below any imits. The engineering controls also need to keep gas, s below any lower explosive limits. Use explosion-proof		
Environmental exposure controls	they comply with the require cases, fume scrubbers, filte	or work process equipment should be checked to ensure ments of environmental protection legislation. In some rs or engineering modifications to the process equipment emissions to acceptable levels.		
Individual protection meas	ures			
Hygiene measures	eating, smoking and using t Appropriate techniques sho	face thoroughly after handling chemical products, before he lavatory and at the end of the working period. uld be used to remove potentially contaminated clothing. g before reusing. Ensure that eyewash stations and safety rkstation location.		
Eye/face protection	assessment indicates this is gases or dusts. If contact is	with an approved standard should be used when a risk e necessary to avoid exposure to liquid splashes, mists, e possible, the following protection should be worn, unless higher degree of protection: safety glasses with side-		
Skin protection				

Section 8. Exposure controls/personal protection

-	
Hand protection	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Body protection	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
Other skin protection	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

<u>Appearance</u>		
Physical state	4	Gas.
Color	4	Colorless.
Molecular weight	4	26.04 g/mole
Molecular formula	4	C2-H2
Melting/freezing point	4	-81°C (-113.8°F)
Critical temperature	:	35.25°C (95.5°F)
Odor	:	Mild. Ethereal.
Odor threshold	4	Not available.
рН	4	Not available.
Flash point	1	Closed cup: -18.15°C (-0.67°F)
Burning time	4	Not applicable.
Burning rate	4	Not applicable.
Evaporation rate	4	Not available.
Flammability (solid, gas)	1	Extremely flammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat and oxidizing materials.
Lower and upper explosive (flammable) limits	1	Lower: 2.5% Upper: 100%
Vapor pressure	1	635 (psig)
Vapor density	1	0.907 (Air = 1)
Specific Volume (ft ³ /lb)	1	14.7058
Gas Density (lb/ft ³)	:	0.0691
Relative density	1	Not applicable.
Solubility	1	Not available.
Solubility in water	1	1.2 g/l
Partition coefficient: n-	:	0.37
octanol/water		
Auto-ignition temperature	4	305°C (581°F)
Decomposition temperature	1	Not available.
SADT	1	Not available.
Viscosity	1	Not applicable.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	: Oxidizers
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely : Not available.

routes of exposure

Potential acute health effects

Eye contact Inhalation Contact with rapidly expanding gas may cause burns or frostbite.No known significant effects or critical hazards.

	Date of	issue/Date	of revision	
--	---------	------------	-------------	--

: 6/7/2016

Section 11. Toxicological information

Skin contact	Contact with rapidly expanding gas may cause burr	ns or frostbite.
Ingestion	As this product is a gas, refer to the inhalation secti	on.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.
Ingestion	: No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure				
Potential immediate effects	: Not available.			
Potential delayed effects	: Not available.			
Long term exposure				
Potential immediate effects	: Not available.			
Potential delayed effects	: Not available.			
Potential chronic health effects				
Not available.				
General	: No known significant effects or critical hazards.			
Carcinogenicity	: No known significant effects or critical hazards.			
Mutagenicity	: No known significant effects or critical hazards.			
Teratogenicity	: No known significant effects or critical hazards.			
Developmental effects	: No known significant effects or critical hazards.			
Fertility effects	: No known significant effects or critical hazards.			

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
acetylene	0.37	-	low

Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

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Section 12. Ecological information

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

```
Disposal methods
```

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty Airgas-owned pressure vessels should be returned to Airgas. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	ΙΑΤΑ
UN number	UN1001	UN1001	UN1001	UN1001	UN1001
UN proper shipping name	ACETYLENE, DISSOLVED	ACETYLENE, DISSOLVED	ACETYLENE, DISSOLVED	ACETYLENE, DISSOLVED	ACETYLENE, DISSOLVED
Transport	2.1	2.1	2.1	2.1	2.1
hazard class(es)	TA MARATE GAS				
Packing group	-	-	-	-	-
Environment	No.	No.	No.	No.	No.
Additional information	Limited quantity Yes. Packaging instruction Passenger aircraft Quantity limitation: Forbidden.	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).	-	-	Passenger and Cargo <u>Aircraft</u> Quantity limitation: 0 Forbidden <u>Cargo Aircraft Only</u> Quantity limitation: 15 kg
	Cargo aircraft Quantity limitation: 15 kg	Explosive Limit and Limited Quantity Index 0			
		Passenger Carrying Ship Index 75			
		Passenger Carrying Road or Rail Index Forbidden			
		Special provisions 38			

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according : Not available. to Annex II of MARPOL 73/78 and the IBC Code

Section 15. Regulatory information

-									
U.	S. Federal regulations	: TS	SCA 8(a) CDR Exer	npt/Parti	al exemption:	Not determin	ed		
		Uı	nited States invent	ory (TSC	A 8b) : This ma	aterial is listed	d or exempted.		
		CI	ean Air Act (CAA)	112 regu	lated flammat	ole substanc	es : acetylene		
(Clean Air Act Section 112 b) Hazardous Air Pollutants (HAPs)	: No	ot listed						
	Clean Air Act Section 602 Class I Substances	: No	ot listed						
	Clean Air Act Section 602 Class II Substances	: No	ot listed						
	DEA List I Chemicals Precursor Chemicals)	: No	ot listed						
	DEA List II Chemicals Essential Chemicals)	: No	ot listed						
S	SARA 302/304								
	Composition/information	<u>on ing</u>	redients						
	No products were found.								
	SARA 304 RQ	: No	ot applicable.						
5	SARA 311/312								
	Classification		re hazard udden release of pre	essure					
	Composition/information	on ing	redients						
	Name		%	Fire	Sudden	Reactive	Immediate	Delayed	

	Name	%	hazard	Sudden release of pressure			Delayed (chronic) health hazard
í	acetylene	100	Yes.	Yes.	No.	No.	No.

: 5/24/2016

Version : 0.03

9/11

State regulationsMassachusetts: This material is listed.New York: This material is not listed.New Jersey: This material is listed.Pennsylvania: This material is listed.International regulationsInternational inventoryAustralia: This material is listed or exempted.Canada: This material is listed or exempted.China: This material is listed or exempted.Europe: This material is listed or exempted.Japan: This material is listed or exempted.Malaysia: Not determined.New Zealand: This material is listed or exempted.Philippines: This material is listed or exempted.Canada: This material is listed or exempted.Japan: This material is listed or exempted.Malaysia: Not determined.New Zealand: This material is listed or exempted.Taiwan: This material is listed or exempted.Canada: This material is listed or exempted.Canada: This material is listed or exempted.Canada: This material is listed or exempted.Cass A: Compressed gas. Class F: Dangerously reactive material.Date of issue/Date of revision: 6/7/2016	acetylene	100		Yes.	Yes.
New York: This material is not listed.New Jersey: This material is listed.Pennsylvania: This material is listed.International regulationsInternational inventoryAustralia: This material is listed or exempted.Canada: This material is listed or exempted.China: This material is listed or exempted.Europe: This material is listed or exempted.Japan: This material is listed or exempted.Malaysia: Not determined.New Zealand: This material is listed or exempted.Philippines: This material is listed or exempted.Taiwan: This material is listed or exempted.Canada: This material is listed or exempted.Malaysia: Not determined.New Zealand: This material is listed or exempted.Philippines: This material is listed or exempted.Republic of Korea: This material is listed or exempted.Canada: Class A: Compressed gas. Class B-1: Flammable gas. Class F: Dangerously reactive material.	State regulations				-
New Jersey:This material is listed.Pennsylvania:This material is listed.International regulationsInternational listsNational inventoryAustralia:This material is listed or exempted.Canada:This material is listed or exempted.China::This material is listed or exempted.Europe:This material is listed or exempted.Japan:This material is listed or exempted.Malaysia:Not determined.New Zealand:This material is listed or exempted.Philippines:This material is listed or exempted.Republic of Korea:This material is listed or exempted.Canada:Class A: Compressed gas. Class F: Dangerously reactive material.	Massachusetts	: This mat	erial is listed.		
Pennsylvania : This material is listed. International regulations International lists National inventory Australia Australia : This material is listed or exempted. Canada : This material is listed or exempted. China : This material is listed or exempted. Europe : This material is listed or exempted. Japan : This material is listed or exempted. Malaysia : Not determined. New Zealand : This material is listed or exempted. Philippines : This material is listed or exempted. Republic of Korea : This material is listed or exempted. Taiwan : This material is listed or exempted. WHMIS (Canada) : Class A: Compressed gas. Class F: Dangerously reactive material.	New York	: This mat	erial is not lis	ted.	
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International listsNational inventoryAustralia: This material is listed or exempted.Canada: This material is listed or exempted.China: This material is listed or exempted.Europe: This material is listed or exempted.Japan: This material is listed or exempted.Malaysia: Not determined.New Zealand: This material is listed or exempted.Philippines: This material is listed or exempted.Republic of Korea: This material is listed or exempted.Taiwan: This material is listed or exempted.Canada: Class A: Compressed gas. Class F: Dangerously reactive material.	Pennsylvania	: This mat	erial is listed.		
National inventoryAustralia: This material is listed or exempted.Canada: This material is listed or exempted.China: This material is listed or exempted.Europe: This material is listed or exempted.Japan: This material is listed or exempted.Malaysia: Not determined.New Zealand: This material is listed or exempted.Philippines: This material is listed or exempted.Republic of Korea: This material is listed or exempted.Taiwan: This material is listed or exempted.Canada: Class A: Compressed gas. Class F: Dangerously reactive material.	International regulations				
Australia: This material is listed or exempted.Canada: This material is listed or exempted.China: This material is listed or exempted.Europe: This material is listed or exempted.Japan: This material is listed or exempted.Malaysia: Not determined.New Zealand: This material is listed or exempted.Philippines: This material is listed or exempted.Republic of Korea: This material is listed or exempted.Taiwan: This material is listed or exempted.Canada: Class A: Compressed gas. Class F: Dangerously reactive material.	International lists				
Canada: This material is listed or exempted.China: This material is listed or exempted.Europe: This material is listed or exempted.Japan: This material is listed or exempted.Malaysia: Not determined.New Zealand: This material is listed or exempted.Philippines: This material is listed or exempted.Republic of Korea: This material is listed or exempted.Taiwan: This material is listed or exempted.Canada: Class A: Compressed gas. Class F: Dangerously reactive material.	National inventory				
China:This material is listed or exempted.Europe:This material is listed or exempted.Japan:This material is listed or exempted.Malaysia:Not determined.New Zealand:This material is listed or exempted.Philippines:This material is listed or exempted.Republic of Korea:This material is listed or exempted.Taiwan:This material is listed or exempted.Canada:Class A: Compressed gas. Class F: Dangerously reactive material.	Australia	: This mat	erial is listed	or exemp	oted.
Europe: This material is listed or exempted.Japan: This material is listed or exempted.Malaysia: Not determined.New Zealand: This material is listed or exempted.Philippines: This material is listed or exempted.Republic of Korea: This material is listed or exempted.Taiwan: This material is listed or exempted.Canada: Class A: Compressed gas. Class F: Dangerously reactive material.	Canada	: This mat	erial is listed	or exemp	oted.
Japan: This material is listed or exempted.Malaysia: Not determined.New Zealand: This material is listed or exempted.Philippines: This material is listed or exempted.Republic of Korea: This material is listed or exempted.Taiwan: This material is listed or exempted.Canada: Class A: Compressed gas.WHMIS (Canada): Class F: Dangerously reactive material.	China	: This mat	erial is listed	or exemp	oted.
Malaysia: Not determined.New Zealand: This material is listed or exempted.Philippines: This material is listed or exempted.Republic of Korea: This material is listed or exempted.Taiwan: This material is listed or exempted.Canada: Class A: Compressed gas. Class B-1: Flammable gas. Class F: Dangerously reactive material.	Europe	: This mat	erial is listed	or exemp	oted.
New Zealand: This material is listed or exempted.Philippines: This material is listed or exempted.Republic of Korea: This material is listed or exempted.Taiwan: This material is listed or exempted.Canada: Class A: Compressed gas. Class B-1: Flammable gas. Class F: Dangerously reactive material.	Japan	: This mat	erial is listed	or exemp	oted.
Philippines : This material is listed or exempted. Republic of Korea : This material is listed or exempted. Taiwan : This material is listed or exempted. Canada : Class A: Compressed gas. WHMIS (Canada) : Class F: Dangerously reactive material.	Malaysia	: Not dete	rmined.		
Republic of Korea: This material is listed or exempted.Taiwan: This material is listed or exempted.Canada: Class A: Compressed gas. Class B-1: Flammable gas. Class F: Dangerously reactive material.	New Zealand	: This mat	erial is listed	or exemp	oted.
Taiwan : This material is listed or exempted. Canada : Class A: Compressed gas. WHMIS (Canada) : Class A: Compressed gas. Class B-1: Flammable gas. Class F: Dangerously reactive material.	Philippines	: This mat	erial is listed	or exemp	oted.
Canada WHMIS (Canada) : Class A: Compressed gas. Class B-1: Flammable gas. Class F: Dangerously reactive material.	Republic of Korea	: This mat	erial is listed	or exemp	oted.
WHMIS (Canada) : Class A: Compressed gas. Class B-1: Flammable gas. Class F: Dangerously reactive material.	Taiwan	: This mat	erial is listed	or exemp	oted.
Class B-1: Flammable gas. Class F: Dangerously reactive material.	<u>Canada</u>				
Class F: Dangerously reactive material.	WHMIS (Canada)				
Date of issue/Date of revision : 6/7/2016 Date of previous issue		Class F:	Dangerously	reactive	material.
	Date of issue/Date of revision	: 6/7/2016	Date of pr	revious iss	ue

Acetylene

Section 15. Regulatory information

CEPA Toxic substances: This material is not listed. Canadian ARET: This material is not listed. Canadian NPRI: This material is listed. Alberta Designated Substances: This material is not listed. Ontario Designated Substances: This material is not listed. Quebec Designated Substances: This material is not listed.

Section 16. Other information

Canada Label requirements	1	Class A: Compressed gas.	
		Class B-1: Flammable gas.	
		Class F: Dangerously reactive material.	

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
	Expert judgment According to package

<u>History</u>	
Date of printing	: 6/7/2016
Date of issue/Date of revision	: 6/7/2016
Date of previous issue	: 5/24/2016
Version	: 0.03

Section 16. Other information

Key to abbreviations	: ATE = Acute Toxicity Estimate
	BCF = Bioconcentration Factor
	GHS = Globally Harmonized System of Classification and Labelling of Chemicals
	IATA = International Air Transport Association
	IBC = Intermediate Bulk Container
	IMDG = International Maritime Dangerous Goods
	LogPow = logarithm of the octanol/water partition coefficient
	MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations
References	: Not available.

✓ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

INSULATION

Section H

Contents:

1. FIBERGLASS

2. RUBBER TEX





Fiber Glass Insulation Revision Date 08/08/2016 Print Date 02/15/2017 Version 1.4 SECTION 1. PRODUCT AND COMPANY IDENTIFICATION Trade name : Basement Wall Insulation® - Unfaced, ComfortTherm®, Condensation Control Blanket - Unfaced, EasyFit®, Engineered Wood Thermal and Acoustical Fiber Glass Insulation, Flex-Glas® PC, Foil-Faced Batts, High-Density Blowing Wool, Kraft-Faced Fiber Glass Insulation, Manufactured Housing Insulation, Microlite® "L", Microlite® XG, Micro-Pak®, Multi-Purpose Fiber Glass, Pan-Insul®, PEBS Blanket[™], Rich-R® Blowing Wool, Sound Control Batts, Sound-SHIELD®, Spin-Glas® TC EQ, Spin-Glas® TC XG, Steel Frame Thermal and Acoustical Fiber Glass Insulation, UMBI®, Unfaced Thermal and Acoustical Fiber **Glass Insulation** Manufacturer or supplier's details Johns Manville Company Address : P.O. Box 5108 Denver, CO USA 80127 : +1 303-978-2000 8:00AM-5:00PM M-F Telephone Emergency telephone : 1-800-424-9300 (Chemtrec, in English) number

Prepared by

: productsafety@jm.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

Temporary mechanical abrasion (itching) of skin, eyes and respiratory tract may occur upon exposure to fibers or dust during handling of this product and cannot occur unless there is direct contact.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

Glass Fiber Product

Hazardous components

Non-hazardous according to 29 CFR 1910.1200, when used as intended.

Relevant ingredients

Chemical name	CAS-No.	Concentration (%)
Non-biopersistent (biosoluable) glass fibers	Not Assigned	80 %

SECTION 4. FIRST AID MEASURES



Fiber Glass Insulation					
Version 1.4		Revision Date 08/08/2016	Print Date 02/15/2017		
General advice	:	Get medical attention if symptoms c	occur.		
If inhaled	:	Move to fresh air. If symptoms persist, call a physiciar	l.		
In case of skin contact	:	Take off all contaminated clothing in If on skin, rinse well with water. Get medical attention if irritation dev			
In case of eye contact	 In case of eye contact, remove contact lens and ri immediately with plenty of water, also under the ey least 15 minutes. If eye irritation persists, consult a specialist. 		so under the eyelids, for at		
If swallowed	:	If symptoms persist, call a physician Rinse mouth with water to remove of plenty of water to help reduce irritation	lust or fibers and drink		
Most important symptoms and effects, both acute and delayed	:	None known.			

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SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Avoid dust formation.
Methods and materials for containment and cleaning up	:	Take up mechanically. Pick up and arrange disposal without creating dust.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Provide appropriate exhaust ventilation at places where dust is formed.
Advice on safe handling	:	For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.
Conditions for safe storage	:	Keep in a dry, cool place.
Materials to avoid	:	No materials to be especially mentioned.



Fiber Glass Insulation

Version 1.4

Revision Date 08/08/2016

Print Date 02/15/2017

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Glass fibers shown to be biosoluble	Not Assigned		1 fibre/cm3	ACGIH
Nuisance dust	Not Assigned	TWA (Total particulate)	15 mg/m3	OSHA
		TWA (Respirable fraction)	5 mg/m3	OSHA

As a member of the North American Insulation Manufacturers Association (NAIMA), JM subscribes to the NAIMA Product Stewardship Program (NPSP). Under the NPSP, JM recommends that exposures be limited to the voluntary concentration of 1 f/cc TWA. The NPSP also includes work practice and respiratory protection recommendations. For more information, see NAIMA's Health and Safety Reference Library (website: http://insulationinstitute.org/tools-resources/resource-library/health-safety/) to find the Product Stewardship Program Pocket Folder (N052) and other Fact Sheets.

Personal protective equipment

Respiratory protection	:	No personal respiratory protective equipment normally required. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Hand protection		
Remarks	:	For prolonged or repeated contact use protective gloves.
Eye protection	:	Safety glasses
Skin and body protection	:	Long sleeved clothing
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: solid
Colour	: white, amber, brown
Odour	: slight
Odour Threshold	: No data available
рН	: Not applicable
Melting point/range	: Not applicable



Fiber Glass Insulation				
Revision Date 08/08/2016	Print Date 02/15/2017			
: Not applicable				
: Not applicable				
: Not applicable				
: No data available				
: Not applicable				
: Not applicable				
: Not applicable				
: Not applicable				
: No data available				
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: Not applicable				
: Not applicable				
: Not applicable				
	Revision Date 08/08/2016: Not applicable: No data available: No data available: No data available: No data available: Not applicable: Not applicable			

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SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	Stable under recommended storage conditions. No hazards to be specially mentioned.
Conditions to avoid	:	No data available

SECTION 11. TOXICOLOGICAL INFORMATION

IARC

Group 3: Not classifiable as to its carcinogenicity to humans

Glass fibers shown to be biosoluble



	Fiber Glass Insulation	
Version 1.4	Revision Date 08/08/2016	Print Date 02/15/2017
OSHA	No component of this product preser equal to 0.1% is identified as a carcir carcinogen by OSHA.	5
NTP	No component of this product preser equal to 0.1% is identified as a know by NTP.	5

Further information

Product:

Remarks: Temporary mechanical abrasion (itching) of skin, eyes and respiratory tract may occur upon exposure to fibers or dust during handling of this product and cannot occur unless there is direct contact.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological : Due to the properties of the product, a hazard to the environment may not be expected.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Disposal of residual product : In accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

These products are not classified as dangerous goods according to international transport regulations.

SECTION 15. REGULATORY INFORMATION

TSCA list



Fiber Glass Insulation

Version 1.4

Revision Date 08/08/2016

Print Date 02/15/2017

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ. This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

California Prop 65	:	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
The components of this product are reported in the following inventories:		
TSCA	:	On TSCA Inventory
DSL	:	All components of this product are on the Canadian DSL

SECTION 16. OTHER INFORMATION

Further information

Revision Date : 08/08/2016

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.





THE MAKERS OF Armaflex[®]

SAFETY DATA SHEET

with reference to (EC) 1907/2006

Armaflex-products ST		26.06.2012
revised 26.06.2012, replaces version 24.02.2011	PAGE:	1 (of 4)
Changes compared to the last version are marked as follows: (*)		

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY

PRODUCT NAME	Armaflex
USE OF THE PRODUCT	Insulation and protection for pipes
MANUFACTURER /DISTRIBUTOR	Armacell GmbH Robert-Bosch-Straße 10, D-48153 Münster Tel: +49 (0)251 - 7603 - 200 Fax: +49 (0)251 - 7603 - 561 www.armacell.com
	Technical contact point: Dr. Dirk Seiling Quality Manager Tel: +49 (0)251 - 7603 - 664 Fax: +49 (0)251 - 7631 - 664 dirk.seiling@armacell.com
EMERGENCY INFORMATION	Beratungsstelle für Vergiftungserscheinungen und Embryonaltoxikologie (Giftnotruf Berlin) Tel: +49 (0)3030686790 www.giftnotruf.de

2. HAZARDS IDENTIFICATION

HAZARD DESIGNATION

3. COMPOSITION / INFORMATION ON INGREDIENTS

None

DESCRIPTION Interlaced foam based on synthetic rubber (elastomeric)

4. FIRST-AID MEASURES

IN CASE OF INHALATION	Unnecessary
IN CASE OF SKIN CONTACT	Unnecessary
IN CASE OF EYE CONTACT	Unnecessary
IN CASE OF INGESTION	If possible, induce vomiting.



THE MAKERS OF Armaflex[®]

SAFETY DATA SHEET

with reference to (EC) 1907/2006

Armaflex-products	STATUS:	26.06.2012
revised 26.06.2012, replaces version 24.02.2011 Changes compared to the last version are marked as follows: (*)	PAGE:	2 (of 4)

5. FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA Unrestricted

SPECIAL EXPOSURE HAZARDS ARISING FROM THE PREPARATION Fire gases, do not breathe. Emits toxic fumes under fire conditions because of incomplete incineration. In the case of fire wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURE

PERSONAL PRECAUTIONS Unnecessary

- ENVIRONMENTAL PRECAUTIONS Unnecessary
- METHODS FOR CLEANING UP / Take up mechanically.
- TAKING UP

7. HANDLING AND STOR	AGE
HINTS FOR SAFE HANDLING	None
HINTS FOR PROTECTION AGAINST FIRE AND EXPLOSION	None
HINTS FOR SEPARATION OF IMCOMPATIBLE PRODUCTS	None
FURTHER INFORMATION ON STORAGE CONDITIONS	Can be stored in clean, dry rooms under normal conditions with respect to humidity (50 - 70 %) and surrounding temperature (0 $^\circ\!C$ - 35 $^\circ\!C$)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

GENERAL HEALTH MEASURES	Unnecessary
RESPIRATORY PROTECTION	Unnecessary
HAND PROTECTION	Unnecessary
EYE PROTECTION	Unnecessary



THE MAKERS OF Armaflex®

SAFETY DATA SHEET

with reference to (EC) 1907/2006

Armaflex-products	STATUS:	26.06.2012
revised 26.06.2012, replaces version 24.02.2011	PAGE:	3 (of 4)
Changes compared to the last version are marked as follows: (*)		

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Tubes and sheets (some brands also self-adhesive); some brands also self-adhesive strips or self-adhesive tapes
COLOUR	Black, grey, or blue
ODOUR	characteristic
MELTING POINT	not applicable
BOILING POINT	not applicable
LOWER EXPLOSION LIMIT	not applicable
UPPER EXPLOSION LIMIT	not applicable
DENSITY AT 20 °C	45 - 100 kg / m³
WATER SOLUBILITY (20 °C)	insoluble

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID	Avoid the influence of naked flames.
HAZARDOUS REACTION	No dangerous reactions known.
HAZARDOUS DECOMPOSITION PRODUCTS	No decomposition if used as prescribed.

11. TOXICOLOGICAL INFORMATION

EXPERIENCE MADE IN PRACTICE When used and handled according to specification, the product does not have any harmful effect according to our experience and knowledge.

12. ECOLOGICAL INFORMATION

ADDITIONAL ECOLOGICAL	The product is classified non-hazardous to waters.
INFORMATION	



THE MAKERS OF Armaflex[®]

SAFETY DATA SHEET

with reference to (EC) 1907/2006

Armaflex-products	STATUS:	26.06.2012
revised 26.06.2012, replaces version 24.02.2011	PAGE:	4 (of 4)
Changes compared to the last version are marked as follows: (*)		

13. DISPOSAL CONSIDERATIONS

DISPOSAL PRODUCT	Dispose waste according to applicable local, state and federal regulations.
LIST OF PROPOSED WASTE CODES IN ACCORDANCE WITH EWC	1 5
	07 02 13 (waste plastic) Please note: The classification of waste for this product may change according to the field of application. Please observe Decision 2001/118/EC.
DISPOSAL PACKAGES	Normal disposal path for cardboard packaging.

14. TRANSPORT INFORMATION

No hazardous material as defined by the transport regulations (ADR/RID, IMDG-Code, ICAO-TI/IATA-DGR).

15. REGULATORY INFORMATION

This product does not require labelling in terms of REACH regulation (EC) 1907/2006

16. OTHER INFORMATION

The data in this safety data sheet correspond to our current level of knowledge and are sufficient for national and EU laws. However, we have no knowledge of or control over the working conditions.

The data in this safety data sheet describe the safety requirements of our product and may not be considered to guarantee any product properties.