Material Safety Data Sheet

Material Name: HAZARDOUS WASTE DERIVED FUEL - 2 **ID: 820014**

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

Product Code: Not applicable

Product Use: Alternate fuel in the cement manufacturing process.This product is a RCRA (US EPA Resource Conservation and Recovery Act) hazardous waste and is subject to the RCRA manifesting requirements.
If this product is used in combination with other products, refer to the Material Safety Data Sheet for those products.

Synonyms: HWDF; Synthetic Fuels; Fuels Blends; Waste Solvents.

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Emergency # 1-800-468-1760
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PREPARED BY: Product MSDS Coordinator APPROVED BY: MSDS Task Force

* * * Section 2 - Hazardous Identification * * *

EMERGENCY OVERVIEW

Appearance
Dark brown to black liquid with strong organic solvent odor.

Signal Word
DANGER!

Physical Hazards
Extremely flammable liquid and vapor. Vapor may cause flash fire.

Health Hazards
May be harmful if inhaled.
May be harmful or fatal if swallowed.
May be harmful if absorbed through the skin.
May irritate the respiratory tract (nose, throat, and lungs), eyes and skin.
May contain material which may cause cancer. Risk of cancer depends on duration and level of exposure.
Contains material which can cause organ damage and central nervous system effects.

POTENTIAL HEALTH EFFECTS

Inhalation (Breathing)
High concentrations of vapor or mist may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). High concentrations of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects. Massive acute overexposure may cause rapid central nervous system depression, sudden collapse, coma, and/or death.

Eyes
May be severely irritating to the eyes. May cause tearing, redness, swelling, burns, and eye damage.

Skin
May cause irritation. May be absorbed through the skin and cause harm as noted under **INHALATION (BREATHING)**.

Ingestion (Swallowing)

May be harmful or fatal if swallowed. May cause throat irritation, nausea, vomiting, and central nervous system effects as noted under **INHALATION (BREATHING)**. Aspiration hazard: Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

Medical Conditions Aggravated by Exposure

Individuals with pre-existing respiratory tract (nose, throat, and lungs), cardiovascular, liver, kidney, central nervous system, eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

Chronic

Prolonged or repeated inhalation may cause toxic effects as noted under **INHALATION (BREATHING)**. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis). Prolonged or repeated inhalation may cause brain, liver, kidney, heart, central nervous system or other organ damage. Contains material which may cause birth defects.

Cancer Information

This product contains materials which can cause cancer. Risk of cancer depends on duration and level of exposure. For more information, see **SECTION 11: CARCINOGENICITY**.

Also see **SECTION 15: CALIFORNIA**.

Environmental Hazards

Product may be toxic to fish, plants, wildlife and/or domestic animals.; Product may be toxic to fish, plants, wildlife and domestic animals See **SECTION 12: ECOLOGICAL INFORMATION**.

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

CAS #	Component	Percent
142-82-5	Heptane (n-)	0-90*
109-66-0	Pentane	0-90*
110-54-3	Hexane	0-90*
108-88-3	Toluene	0-60*
110-82-7	Cyclohexane	0-90*
111-65-9	Octanes	0-90*
111-84-2	Nonane	0-90*
100-41-4	Ethyl benzene	0-60*
124-18-5	Decane	0-90*
108-95-2	Phenol	0-60*
1330-20-7	Xylenes (o-, m-, p- isomers)	0-60*
112-40-3	Dodecane	0-90*
71-43-2	Benzene	0-60*
100-42-5	Styrene	0-60*
91-20-3	Naphthalene	0-60*
110-43-0	Methyl n-amyl ketone	0-40*
78-93-3	Methyl ethyl ketone	0-40*
7732-18-5	Water	0-40*
107-21-1	Ethylene glycol	0-40*
108-94-1	Cyclohexanone	0-40*
108-93-0	Cyclohexanol	0-40*
67-63-0	Isopropyl alcohol	0-40*
108-10-1	Methylisobutyl ketone	0-40*
71-36-3	n-Butyl alcohol	0-40*
71-23-8	n-Propyl alcohol	0-40*
67-64-1	Acetone	0-40*
57-55-6	1,2-Propylene glycol	0-40*
64-17-5	Ethyl alcohol	0-40*

67-56-1	Methyl alcohol	0-40*
Not Available	Solids	0-25*
79-01-6	Trichloroethene	0-20*
71-55-6	1,1,1-Trichloroethane	0-20*
127-18-4	Tetrachloroethylene	0-20*
75-09-2	Methylene chloride	0-20*
123-86-4	n-Butyl acetate	0-15*
109-60-4	n-Propyl acetate	0-15*
109-86-4	2-Methoxyethanol	0-15*
110-49-6	2-Methoxyethyl acetate	0-15*
110-80-5	2-Ethoxyethanol	0-15*
108-21-4	Isopropyl acetate	0-15*
108-05-4	Vinyl acetate	0-15*
107-98-2	Propylene glycol monomethyl ether	0-15*
141-78-6	Ethylacetate	0-15*
79-20-9	Methyl acetate	0-15*
112-07-2	Ethylene glycol, monobutyl ether acetate	0-15*

* Even though the concentration range does not fall under the ranges prescribed by WHMIS, this is the actual range which varies with each batch of the product.

This product may contain other components than listed. Typical components are listed. Composition will vary.

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

Inhalation (Breathing)

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.

Eyes

If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention.

Skin

Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists. Wash contaminated clothing before reuse.

Ingestion (Swallowing)

Do NOT induce vomiting. Immediately get medical attention. Call 1-800-468-1760 for additional information. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

Notes to Physicians

Treat symptomatically and supportively. Increased sensitivity of the heart to Adrenaline (epinephrine) may be caused by overexposure to product. Administration of gastric lavage, if warranted, should be performed by qualified medical personnel. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760 for additional information.

* * * Section 5 - Fire Fighting Measures * * *

Hazardous Combustion Products

Decomposition and combustion materials may be toxic., Burning may produce phosgene, chlorides, chloroacetylenes, formaldehyde, peracetic acid, carbon monoxide and unidentified organic compounds.

Conditions of Flammability

Heat, sparks, or flame.

Extinguishing Media

Carbon dioxide, foam, dry chemical, or water spray.

Fire Fighting Equipment/Instructions

Keep storage containers cool with water spray. A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

NFPA Ratings: Health: 2 **Fire:** 3 **Reactivity:** 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Fire and Explosion Hazards

Vapor explosion hazard indoors, outdoors, or in sewers. Vapors may travel to ignition source and flashback. Vapors will spread along the ground and collect in low or confined areas. Run-off to sewer may create a fire or explosion hazard. Heated containers may rupture, explode, or be thrown into the air. "Empty" containers may retain residue and can be dangerous. Products are not sensitive to mechanical impact. Product may be sensitive to static discharge, which could result in fire or explosion.

* * * Section 6 - Accidental Release Measures * * *

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal. Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal.

There may be specific federal regulatory reporting requirements associated with spills, leaks, or releases of this product. Also see **SECTION 15: REGULATORY INFORMATION.**

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Keep away from heat, sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean, sparkproof tools and explosion-proof equipment. When transferring large quantities of product, metal containers, including trucks and tank cars, should be grounded and bonded. Do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes. Do not smoke while using this product.

Shipping and Storing

Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition; containers may explode and cause injury or death. Empty product containers may retain product residue and can be dangerous. See **SECTION 14: TRANSPORTATION INFORMATION** for Packing Group information.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Exposure Guidelines

Component Exposure Limits

Ethyl benzene (100-41-4)

ACGIH:	20 ppm TWA
OSHA Final:	100 ppm TWA; 435 mg/m3 TWA
OSHA Vacated:	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

Styrene (100-42-5)

ACGIH:	20 ppm TWA
	40 ppm STEL
OSHA Final:	100 ppm TWA
	200 ppm Ceiling
OSHA Vacated:	50 ppm TWA; 215 mg/m3 TWA
	100 ppm STEL; 425 mg/m3 STEL
NIOSH:	50 ppm TWA; 215 mg/m3 TWA
	100 ppm STEL; 425 mg/m3 STEL

Toluene (108-88-3)

ACGIH:	20 ppm TWA
OSHA Final:	200 ppm TWA
	300 ppm Ceiling
OSHA Vacated:	100 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

Phenol (108-95-2)

ACGIH:	5 ppm TWA
	Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA Final:	5 ppm TWA; 19 mg/m3 TWA
	prevent or reduce skin absorption
OSHA Vacated:	5 ppm TWA; 19 mg/m3 TWA
	Prevent or reduce skin absorption
NIOSH:	5 ppm TWA; 19 mg/m3 TWA
	15.6 ppm Ceiling (15 min); 60 mg/m3 Ceiling (15 min)
	Potential for dermal absorption

Pentane (109-66-0)

ACGIH:	600 ppm TWA
OSHA Final:	1000 ppm TWA; 2950 mg/m3 TWA
OSHA Vacated:	600 ppm TWA; 1800 mg/m3 TWA
	750 ppm STEL; 2250 mg/m3 STEL
NIOSH:	120 ppm TWA; 350 mg/m3 TWA
	610 ppm Ceiling (15 min); 1800 mg/m3 Ceiling (15 min)

Hexane (110-54-3)

ACGIH:	50 ppm TWA
	Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA Final:	500 ppm TWA; 1800 mg/m3 TWA
OSHA Vacated:	50 ppm TWA; 180 mg/m3 TWA
NIOSH:	50 ppm TWA; 180 mg/m3 TWA

Cyclohexane (110-82-7)

ACGIH:	100 ppm TWA
OSHA Final:	300 ppm TWA; 1050 mg/m3 TWA
OSHA Vacated:	300 ppm TWA; 1050 mg/m3 TWA
NIOSH:	300 ppm TWA; 1050 mg/m3 TWA

Octanes (111-65-9)

ACGIH:	300 ppm TWA
OSHA Final:	500 ppm TWA; 2350 mg/m3 TWA
OSHA Vacated:	300 ppm TWA; 1450 mg/m3 TWA
	375 ppm STEL; 1800 mg/m3 STEL
NIOSH:	75 ppm TWA; 350 mg/m3 TWA
	385 ppm Ceiling (15 min); 1800 mg/m3 Ceiling (15 min)

Nonane (111-84-2)

ACGIH:	200 ppm TWA
OSHA Vacated:	200 ppm TWA; 1050 mg/m3 TWA
NIOSH:	200 ppm TWA; 1050 mg/m3 TWA

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH:	100 ppm TWA
	150 ppm STEL
OSHA Final:	100 ppm TWA; 435 mg/m3 TWA
OSHA Vacated:	100 ppm TWA; 435 mg/m3 TWA
	150 ppm STEL; 655 mg/m3 STEL

Heptane (n-) (142-82-5)

ACGIH:	400 ppm TWA
	500 ppm STEL
OSHA Final:	500 ppm TWA; 2000 mg/m3 TWA
OSHA Vacated:	400 ppm TWA; 1600 mg/m3 TWA
	500 ppm STEL; 2000 mg/m3 STEL
NIOSH:	85 ppm TWA; 350 mg/m3 TWA
	440 ppm Ceiling (15 min); 1800 mg/m3 Ceiling (15 min)

Benzene (71-43-2)

ACGIH:	0.5 ppm TWA
	2.5 ppm STEL
	Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA Final:	5 ppm STEL (See 29 CFR 1910.1028, 15 min); 0.5 ppm Action Level; 1 ppm TWA
	10 ppm TWA (applies to industry segments exempt from the benzene standard at 29 CFR 1910.1028); 1 ppm TWA
	5 ppm STEL (see 29 CFR 1910.1028)
	25 ppm Ceiling
OSHA Vacated:	10 ppm TWA (unless specified in 1910.1028)
	50 ppm STEL (unless specified in 1910.1028, 10 min)
	25 ppm Ceiling (unless specified in 1910.1028)
NIOSH:	0.1 ppm TWA
	1 ppm STEL

Naphthalene (91-20-3)

ACGIH:	10 ppm TWA
	15 ppm STEL
	Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA Final:	10 ppm TWA; 50 mg/m3 TWA
OSHA Vacated:	10 ppm TWA; 50 mg/m3 TWA
	15 ppm STEL; 75 mg/m3 STEL
NIOSH:	10 ppm TWA; 50 mg/m3 TWA
	15 ppm STEL; 75 mg/m3 STEL

Cyclohexanol (108-93-0)

ACGIH:	50 ppm TWA
	Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA Final:	50 ppm TWA; 200 mg/m3 TWA
OSHA Vacated:	50 ppm TWA; 200 mg/m3 TWA
	Prevent or reduce skin absorption
NIOSH:	50 ppm TWA; 200 mg/m3 TWA
	Potential for dermal absorption

Cyclohexanone (108-94-1)

ACGIH:	20 ppm TWA
	50 ppm STEL
	Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA Final:	50 ppm TWA; 200 mg/m3 TWA
OSHA Vacated:	25 ppm TWA; 100 mg/m3 TWA
	Prevent or reduce skin absorption
NIOSH:	25 ppm TWA; 100 mg/m3 TWA
	Potential for dermal absorption

Methylisobutyl ketone (108-10-1)

ACGIH:	20 ppm TWA
	75 ppm STEL
OSHA Final:	100 ppm TWA; 410 mg/m3 TWA
OSHA Vacated:	50 ppm TWA; 205 mg/m3 TWA
	75 ppm STEL; 300 mg/m3 STEL
NIOSH:	50 ppm TWA; 205 mg/m3 TWA
	75 ppm STEL; 300 mg/m3 STEL

Ethyl alcohol (64-17-5)

ACGIH:	1000 ppm STEL
OSHA Final:	1000 ppm TWA; 1900 mg/m3 TWA
OSHA Vacated:	1000 ppm TWA; 1900 mg/m3 TWA
NIOSH:	1000 ppm TWA; 1900 mg/m3 TWA

Methyl alcohol (67-56-1)

ACGIH:	200 ppm TWA
	250 ppm STEL
	Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA Final:	200 ppm TWA; 260 mg/m3 TWA
OSHA Vacated:	200 ppm TWA; 260 mg/m3 TWA
	250 ppm STEL; 325 mg/m3 STEL
	Prevent or reduce skin absorption
NIOSH:	200 ppm TWA; 260 mg/m3 TWA
	250 ppm STEL; 325 mg/m3 STEL
	Potential for dermal absorption

Isopropyl alcohol (67-63-0)

ACGIH:	200 ppm TWA
	400 ppm STEL
OSHA Final:	400 ppm TWA; 980 mg/m3 TWA
OSHA Vacated:	400 ppm TWA; 980 mg/m3 TWA
	500 ppm STEL; 1225 mg/m3 STEL
NIOSH:	400 ppm TWA; 980 mg/m3 TWA
	500 ppm STEL; 1225 mg/m3 STEL

Acetone (67-64-1)

ACGIH:	500 ppm TWA
	750 ppm STEL
OSHA Final:	1000 ppm TWA; 2400 mg/m3 TWA
OSHA Vacated:	750 ppm TWA; 1800 mg/m3 TWA
	2400 mg/m3 STEL (The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors); 1000 ppm STEL
NIOSH:	250 ppm TWA; 590 mg/m3 TWA

n-Propyl alcohol (71-23-8)

ACGIH:	100 ppm TWA
OSHA Final:	200 ppm TWA; 500 mg/m3 TWA
OSHA Vacated:	200 ppm TWA; 500 mg/m3 TWA
	250 ppm STEL; 625 mg/m3 STEL
NIOSH:	200 ppm TWA; 500 mg/m3 TWA
	250 ppm STEL; 625 mg/m3 STEL
	Potential for dermal absorption

n-Butyl alcohol (71-36-3)

ACGIH: 20 ppm TWA
OSHA Final: 100 ppm TWA; 300 mg/m3 TWA
OSHA Vacated: 50 ppm Ceiling; 150 mg/m3 Ceiling
Prevent or reduce skin absorption
NIOSH: 50 ppm Ceiling; 150 mg/m3 Ceiling
Potential for dermal absorption

Ethylene glycol (107-21-1)

ACGIH: 100 mg/m3 Ceiling (aerosol only)
OSHA Vacated: 50 ppm Ceiling; 125 mg/m3 Ceiling

Methyl ethyl ketone (78-93-3)

ACGIH: 200 ppm TWA
300 ppm STEL
OSHA Final: 200 ppm TWA; 590 mg/m3 TWA
OSHA Vacated: 200 ppm TWA; 590 mg/m3 TWA
300 ppm STEL; 885 mg/m3 STEL
NIOSH: 200 ppm TWA; 590 mg/m3 TWA
300 ppm STEL; 885 mg/m3 STEL

Methyl n-amyl ketone (110-43-0)

ACGIH: 50 ppm TWA
OSHA Final: 100 ppm TWA; 465 mg/m3 TWA
OSHA Vacated: 100 ppm TWA; 465 mg/m3 TWA
NIOSH: 100 ppm TWA; 465 mg/m3 TWA

1,1,1-Trichloroethane (71-55-6)

ACGIH: 350 ppm TWA
450 ppm STEL
OSHA Final: 350 ppm TWA; 1900 mg/m3 TWA
OSHA Vacated: 350 ppm TWA; 1900 mg/m3 TWA
450 ppm STEL; 2450 mg/m3 STEL
NIOSH: 350 ppm Ceiling (15 min); 1900 mg/m3 Ceiling (15 min)

Trichloroethene (79-01-6)

ACGIH: 10 ppm TWA
25 ppm STEL
OSHA Final: 100 ppm TWA
200 ppm Ceiling
OSHA Vacated: 50 ppm TWA; 270 mg/m3 TWA
200 ppm STEL; 1080 mg/m3 STEL

Methylene chloride (75-09-2)

ACGIH: 50 ppm TWA
OSHA Final: 125 ppm STEL (See 29 CFR 1910.1052, 15 min); 12.5 ppm Action Level (See 29 CFR 1910.1052); 25 ppm TWA (See 29 CFR 1910.1052)
25 ppm TWA
125 ppm STEL (see 29 CFR 1910.1052)
OSHA Vacated: 500 ppm TWA
2000 ppm STEL (5 min in any 3 h)
1000 ppm Ceiling

Tetrachloroethylene (127-18-4)

ACGIH: 25 ppm TWA
100 ppm STEL
OSHA Final: 100 ppm TWA
200 ppm Ceiling
OSHA Vacated: 25 ppm TWA; 170 mg/m3 TWA

n-Butyl acetate (123-86-4)

ACGIH:	150 ppm TWA
	200 ppm STEL
OSHA Final:	150 ppm TWA; 710 mg/m3 TWA
OSHA Vacated:	150 ppm TWA; 710 mg/m3 TWA
	200 ppm STEL; 950 mg/m3 STEL
NIOSH:	150 ppm TWA; 710 mg/m3 TWA
	200 ppm STEL; 950 mg/m3 STEL

n-Propyl acetate (109-60-4)

ACGIH:	200 ppm TWA
	250 ppm STEL
OSHA Final:	200 ppm TWA; 840 mg/m3 TWA
OSHA Vacated:	200 ppm TWA; 840 mg/m3 TWA
	250 ppm STEL; 1050 mg/m3 STEL
NIOSH:	200 ppm TWA; 840 mg/m3 TWA
	250 ppm STEL; 1050 mg/m3 STEL

Ethylacetate (141-78-6)

ACGIH:	400 ppm TWA
OSHA Final:	400 ppm TWA; 1400 mg/m3 TWA
OSHA Vacated:	400 ppm TWA; 1400 mg/m3 TWA
NIOSH:	400 ppm TWA; 1400 mg/m3 TWA

Propylene glycol monomethyl ether (107-98-2)

ACGIH:	50 ppm TWA
	100 ppm STEL
OSHA Vacated:	100 ppm TWA; 360 mg/m3 TWA
	150 ppm STEL; 540 mg/m3 STEL
NIOSH:	100 ppm TWA; 360 mg/m3 TWA
	150 ppm STEL; 540 mg/m3 STEL

2-Methoxyethanol (109-86-4)

ACGIH:	0.1 ppm TWA
	Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA Final:	25 ppm TWA; 80 mg/m3 TWA
	prevent or reduce skin absorption
OSHA Vacated:	25 ppm TWA; 80 mg/m3 TWA
	Prevent or reduce skin absorption
NIOSH:	0.1 ppm TWA; 0.3 mg/m3 TWA
	Potential for dermal absorption

Ethylene glycol, monobutyl ether acetate (112-07-2)

ACGIH:	20 ppm TWA
NIOSH:	5 ppm TWA; 33 mg/m3 TWA

Isopropyl acetate (108-21-4)

ACGIH:	100 ppm TWA
	200 ppm STEL
OSHA Final:	250 ppm TWA; 950 mg/m3 TWA
OSHA Vacated:	250 ppm TWA; 950 mg/m3 TWA
	310 ppm STEL; 1185 mg/m3 STEL

2-Methoxyethyl acetate (110-49-6)

ACGIH:	0.1 ppm TWA
	Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA Final:	25 ppm TWA; 120 mg/m3 TWA
	prevent or reduce skin absorption
OSHA Vacated:	25 ppm TWA; 120 mg/m3 TWA
	Prevent or reduce skin absorption
NIOSH:	0.1 ppm TWA; 0.5 mg/m3 TWA
	Potential for dermal absorption

Methyl acetate (79-20-9)

ACGIH:	200 ppm TWA
	250 ppm STEL
OSHA Final:	200 ppm TWA; 610 mg/m3 TWA
OSHA Vacated:	200 ppm TWA; 610 mg/m3 TWA
	250 ppm STEL; 760 mg/m3 STEL
NIOSH:	200 ppm TWA; 610 mg/m3 TWA
	250 ppm STEL; 760 mg/m3 STEL

Vinyl acetate (108-05-4)

ACGIH:	10 ppm TWA
	15 ppm STEL
OSHA Vacated:	10 ppm TWA; 30 mg/m3 TWA
	20 ppm STEL; 60 mg/m3 STEL
NIOSH:	4 ppm Ceiling (15 min); 15 mg/m3 Ceiling (15 min)

2-Ethoxyethanol (110-80-5)

ACGIH:	5 ppm TWA
	Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA Final:	200 ppm TWA; 740 mg/m3 TWA
	prevent or reduce skin absorption
OSHA Vacated:	200 ppm TWA; 740 mg/m3 TWA
	Prevent or reduce skin absorption
NIOSH:	0.5 ppm TWA; 1.8 mg/m3 TWA
	Potential for dermal absorption

Engineering Controls

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits. Where explosive mixtures may be present, equipment safe for such locations should be used.

Personal Protective Equipment: Respiratory

Use NIOSH air-certified, air-supplied respirators (self-contained breathing apparatus or air-line) respiratory protective equipment when concentration of components may exceed applicable exposure limits. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4. Consult a qualified Industrial Hygienist or Safety Professional for respirator selection and guidance.

Personal Protective Equipment: Eyes/Face

Where eye contact is likely, wear chemical goggles; contact lens use is not recommended.

Personal Protective Equipment: Skin

Where skin contact is likely, wear impervious gloves. Use of natural rubber (latex) or equivalent gloves is not recommended.

When product is heated and skin contact is likely, wear heat-insulating gloves, boots, and other protective clothing.

To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, whole body suits, or other protective clothing.

Personal Protective Equipment: Personal Hygiene

Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard affected clothing, shoes, and/or protective equipment if they cannot be thoroughly cleaned. Discard leather articles, such as shoes, saturated with this product.

Other Personal Protective Equipment

Where spills and splashes are likely, facilities storing or using this product should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance/Odor :	Dark brown to black liquid, strong solvent odor	**pH:**	6 to 10 (Typical)
Boiling Point:	>100°F (>38°C)	**Melting Point:**	Not available.
Solubility (H2O):	Slight.	**Specific Gravity:**	0.85 to 1.2 (water = 1)
Density:	7.1 to 10 LB/US gal (850 to 1200 g/L)	**Octanol/H2O Coeff.:**	Not available.
Evaporation Rate:	Not available.	**Molecular Weight:**	Not available.
Odor Threshold:	Not available.	**Auto Ignition Temperature:**	800ºF (427ºC)(Based on similar product)
LFL:	1 VOL% (based on similar product)	**Flash Point:**	<70ºF (21ºC) Tag Closed Cup
UFL:	13 VOL% (based on similar product)	**Vapor Density:**	2 to 4 (air = 1)
Vapor Pressure:	60 to 100 mm Hg at 68ºF (20ºC)		

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Stability

Stable under normal temperatures and pressures.

Incompatibility

Avoid acids, alkalies, oxidizing agents, reducing agents, reactive halogens, or reactive metals.

Reactivity

Polymerization is not known to occur under normal temperature and pressures. Not reactive with water.

Hazardous Decomposition Products

None under normal temperatures and pressures., See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS**.

Conditions To Avoid

Avoid heat, sparks, or flame.

* * * Section 11 - Toxicological Information * * *

Toxicity Data

Component Analysis - LD50/LC50

Ethyl benzene (100-41-4)
Inhalation LC50 Rat 17.2 mg/L 4 h; Oral LD50 Rat 3500 mg/kg; Dermal LD50 Rabbit 15354 mg/kg

Styrene (100-42-5)
Inhalation LC50 Rat 11.8 mg/L 4 h; Oral LD50 Rat 1000 mg/kg

Phenol (108-95-2)
Dermal LD50 Rabbit 630 mg/kg

Pentane (109-66-0)
Inhalation LC50 Rat 364 g/m3 4 h; Dermal LD50 Rabbit 3000 mg/kg

Hexane (110-54-3)
Inhalation LC50 Rat 48000 ppm 4 h; Dermal LD50 Rabbit 3000 mg/kg

Cyclohexane (110-82-7)
Inhalation LC50 Rat 13.9 mg/L 4 h; Dermal LD50 Rabbit >2000 mg/kg; Oral LD50 Rat >5000 mg/kg

Octanes (111-65-9)
Inhalation LC50 Rat 118 g/m3 4 h

Nonane (111-84-2)
Inhalation LC50 Rat 3200 ppm 4 h

Dodecane (112-40-3)
Inhalation LC50 Rat >142 ppm 8 h

Decane (124-18-5)
Inhalation LC50 Rat >1369 ppm 8 h; Dermal LD50 Rat >2000 mg/kg; Oral LD50 Rat >5000 mg/kg
Xylenes (o-, m-, p- isomers) (1330-20-7)
Inhalation LC50 Rat 47635 mg/L 4 h; Oral LD50 Rat 4300 mg/kg
Heptane (n-) (142-82-5)
Inhalation LC50 Rat 103 g/m3 4 h; Oral LD50 Mouse 5000 mg/kg; Dermal LD50 Rabbit 3000 mg/kg
Benzene (71-43-2)
Inhalation LC50 Rat 13050 - 14380 ppm 4 h
Naphthalene (91-20-3)
Dermal LD50 Rabbit >20 g/kg; Inhalation LC50 Rat >340 mg/m3 1 h
Cyclohexanol (108-93-0)
Inhalation LC50 Rat >3.6 mg/L 4 h
Cyclohexanone (108-94-1)
Inhalation LC50 Rat 8000 ppm 4 h; Dermal LD50 Rabbit 948 mg/kg; Oral LD50 Rat 800 mg/kg
Methylisobutyl ketone (108-10-1)
Inhalation LC50 Rat 8.2 mg/L 4 h; Dermal LD50 Rabbit >16000 mg/kg; Oral LD50 Rat 2080 mg/kg
1,2-Propylene glycol (57-55-6)
Dermal LD50 Rabbit 20800 mg/kg; Oral LD50 Rat 20000 mg/kg
Ethyl alcohol (64-17-5)
Inhalation LC50 Rat 124.7 mg/L 4 h
Methyl alcohol (67-56-1)
Oral LD50 Rat 5628 mg/kg; Inhalation LC50 Rat 83.2 mg/L 4 h
Isopropyl alcohol (67-63-0)
Oral LD50 Rat 4396 mg/kg; Dermal LD50 Rabbit 12800 mg/kg; Inhalation LC50 Rat 16000 ppm 8 h
Acetone (67-64-1)
Inhalation LC50 Rat 50100 mg/m3 8 h
n-Propyl alcohol (71-23-8)
Oral LD50 Rat 1870 mg/kg; Inhalation LC50 Rat >13548 ppm 4 h
n-Butyl alcohol (71-36-3)
Inhalation LC50 Rat 8000 ppm 4 h
Ethylene glycol (107-21-1)
Oral LD50 Rat 4000 mg/kg
Methyl ethyl ketone (78-93-3)
Inhalation LC50 Rat 23500 mg/m3 8 h
1,1,1-Trichloroethane (71-55-6)
Dermal LD50 Rabbit >15800 mg/kg; Oral LD50 Rat >2000 mg/kg; Inhalation LC50 Rat 18000 ppm 4 h
Methylene chloride (75-09-2)
Oral LD50 Rat >2000 mg/kg
Tetrachloroethylene (127-18-4)
Inhalation LC50 Rat 4000 ppm 4 h; Dermal LD50 Mouse 2800 mg/kg; Oral LD50 Rat 2629 mg/kg
n-Butyl acetate (123-86-4)
Inhalation LC50 Rat 390 ppm 4 h; Dermal LD50 Rabbit >17600 mg/kg
n-Propyl acetate (109-60-4)
Dermal LD50 Rabbit >20 mL/kg; Oral LD50 Rat 9370 mg/kg
Ethylacetate (141-78-6)
Dermal LD50 Rabbit >20 mL/kg; Oral LD50 Rat 5620 mg/kg
2-Methoxyethanol (109-86-4)
Inhalation LC50 Rat 1500 ppm 7 h; Dermal LD50 Rabbit 1280 mg/kg
Ethylene glycol, monobutyl ether acetate (112-07-2)
Dermal LD50 Rabbit 1480 mg/kg; Oral LD50 Rat 1600 mg/kg
Isopropyl acetate (108-21-4)
Inhalation LC50 Rat 50600 mg/m3 8 h; Dermal LD50 Rabbit >20 mL/kg; Oral LD50 Rat 6750 mg/kg
Methyl acetate (79-20-9)
Inhalation LC50 Rat 16000 ppm 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >5 g/kg
Vinyl acetate (108-05-4)
Inhalation LC50 Rat 11400 mg/m3 4 h; Dermal LD50 Rabbit 2320 mg/kg; Oral LD50 Rat 2920 mg/kg
2-Ethoxyethanol (110-80-5)
Inhalation LC50 Rat 2000 ppm 7 h; Dermal LD50 Rabbit 3300 mg/kg; Oral LD50 Rat 1746 mg/kg

Acute Effects

Component Carcinogenicity

Ethyl benzene (100-41-4)
- **ACGIH:** A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
- **OSHA:** Present (select carcinogen)
- **IARC:** Monograph 77 [2000] (Group 2B (possibly carcinogenic to humans))

Styrene (100-42-5)
- **ACGIH:** A4 - Not Classifiable as a Human Carcinogen
- **OSHA:** Present (select carcinogen)
- **NTP:** Reasonably Anticipated To Be A Human Carcinogen (Suspect Carcinogen)
- **IARC:** Monograph 82 [2002]; Monograph 60 [1994] (Group 2B (possibly carcinogenic 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))

Phenol (108-95-2)
- **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))

Benzene (71-43-2)
- **ACGIH:** A1 - Confirmed Human Carcinogen
- **OSHA:** 5 ppm STEL (See 29 CFR 1910.1028, 15 min); 0.5 ppm Action Level; 1 ppm TWA (specifically regulated carcinogen)
  Present (select carcinogen)
- **NIOSH:** potential occupational carcinogen
- **NTP:** Known Human Carcinogen (Known Carcinogen)
- **IARC:** Monograph 100F [2012]; Supplement 7 [1987]; Monograph 29 [1982] (Group 1 (carcinogenic to humans))

Naphthalene (91-20-3)
- **ACGIH:** A4 - Not Classifiable as a Human Carcinogen
- **OSHA:** Present (select carcinogen)
- **NTP:** Reasonably Anticipated To Be A Human Carcinogen (Suspect Carcinogen)
- **IARC:** Monograph 82 [2002] (Group 2B (possibly carcinogenic 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))

Methylisobutyl ketone (108-10-1)
- **ACGIH:** A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
- **OSHA:** Present (select carcinogen)
- **IARC:** Monograph 101 [2012] (Group 2B (possibly carcinogenic to humans))

Ethyl alcohol (64-17-5)
- **ACGIH:** A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
- **OSHA:** Present (select carcinogen)
- **IARC:** Monograph 100E [2012] (in alcoholic beverages); Monograph 96 [2010] (in alcoholic beverages) (Group 1 (carcinogenic to humans))

Isopropyl alcohol (67-63-0)
- **ACGIH:** A4 - Not Classifiable as a Human Carcinogen
- **IARC:** Monograph 71 [1999]; Supplement 7 [1987]; Monograph 15 [1977] (Group 3 (not classifiable))

Acetone (67-64-1)
- **ACGIH:** A4 - Not Classifiable as a Human Carcinogen

n-Propyl alcohol (71-23-8)
- **ACGIH:** A4 - Not Classifiable as a Human Carcinogen

Ethylene glycol (107-21-1)
- **ACGIH:** A4 - Not Classifiable as a Human Carcinogen

1,1,1-Trichloroethane (71-55-6)
- **ACGIH:** A4 - Not Classifiable as a Human Carcinogen
- **IARC:** Monograph 71 [1999]; Supplement 7 [1987]; Monograph 20 [1979] (Group 3 (not classifiable))

Trichloroethene (79-01-6)
ACGIH: A2 - Suspected Human Carcinogen
OSHA: Present (select carcinogen)
NIOSH: potential occupational carcinogen
NTP: Reasonably Anticipated To Be A Human Carcinogen (Suspect Carcinogen)
IARC: Monograph 106 [in preparation]; Monograph 63 [1995] (Group 1 (carcinogenic to humans))

Methylene chloride (75-09-2)
ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
OSHA: 125 ppm STEL (See 29 CFR 1910.1052, 15 min); 12.5 ppm Action Level (See 29 CFR 1910.1052); 25 ppm TWA (See 29 CFR 1910.1052) (specifically regulated carcinogen)
Present (select carcinogen)
NIOSH: potential occupational carcinogen
NTP: Reasonably Anticipated To Be A Human Carcinogen (Suspect Carcinogen)
IARC: Monograph 71 [1999]; Supplement 7 [1987] (Group 2B (possibly carcinogenic to humans))

Tetrachloroethylene (127-18-4)
ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
OSHA: Present (select carcinogen)
NIOSH: potential occupational carcinogen
NTP: Reasonably Anticipated To Be A Human Carcinogen (Suspect Carcinogen)
IARC: Monograph 106 [in preparation]; Monograph 63 [1995]; Supplement 7 [1987] (Group 2A (probably carcenogenic to humans))

Propylene glycol monomethyl ether (107-98-2)
ACGIH: A4 - Not Classifiable as a Human Carcinogen

Ethylene glycol, monobutyl ether acetate (112-07-2)
ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Vinyl acetate (108-05-4)
ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
OSHA: Present (select carcinogen)
IARC: Monograph 63 [1995]; Supplement 7 [1987] (Group 2B (possibly carcinogenic to humans))

Sensitization

This product may demonstrate human, animal, and/or experimental effects of skin and/or respiratory tract sensitization.

Mutagenicity

This product may demonstrate human, animal, and/or experimental effects of mutagenicity.

Reproductive Toxicity

This product may contain components which have demonstrated human, animal, and/or experimental effects of reproductive toxicity.

Also see **SECTION 15: CALIFORNIA**.

Teratogenicity

This product may contain components which have demonstrated human, animal, and/or experimental effects of teratogenicity.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

Product may be toxic to fish, plants, wildlife and/or domestic animals.

Component Analysis - Ecotoxicity - Aquatic Toxicity

Ethyl benzene (100-41-4)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	1.8 - 2.4 mg/L	

Styrene (100-42-5)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	3.3 - 7.4 mg/L	

Toluene (108-88-3)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	5.46 - 9.83 mg/L [Static]	
48 Hr EC50 Daphnia magna	11.5 mg/L	

Phenol (108-95-2)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	4.24 - 10.7 mg/L [Static]	
48 Hr EC50 Daphnia magna	10.2 - 15.5 mg/L	

Pentane (109-66-0)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	9.74 mg/L	

Octanes (111-65-9)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 water flea	0.38 mg/L	

Decane (124-18-5)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	0.029 mg/L	

Xylenes (o-, m-, p- isomers) (1330-20-7)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 water flea	3.82 mg/L	
48 Hr LC50 Gammarus lacustris	0.6 mg/L	

Benzene (71-43-2)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	8.76 - 15.6 mg/L [Static]	
48 Hr EC50 Daphnia magna	10 mg/L	

Naphthalene (91-20-3)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr LC50 Daphnia magna	2.16 mg/L	
48 Hr EC50 Daphnia magna	1.96 mg/L [Flow through]	
48 Hr EC50 Daphnia magna	1.09 - 3.4 mg/L [Static]	

Methylisobutyl ketone (108-10-1)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	170 mg/L	

1,2-Propylene glycol (57-55-6)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	>1000 mg/L [Static]	

Ethyl alcohol (64-17-5)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr LC50 Daphnia magna	9268 - 14221 mg/L	
48 Hr EC50 Daphnia magna	2 mg/L [Static]	

Isopropyl alcohol (67-63-0)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	13299 mg/L	

Acetone (67-64-1)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	10294 - 17704 mg/L [Static]	
48 Hr EC50 Daphnia magna	12600 - 12700 mg/L	

n-Propyl alcohol (71-23-8)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	3642 mg/L	
48 Hr EC50 Daphnia magna	3339 - 3977 mg/L [Static]	

n-Butyl alcohol (71-36-3)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	1983 mg/L	
48 Hr EC50 Daphnia magna	1897 - 2072 mg/L [Static]	

Ethylene glycol (107-21-1)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	46300 mg/L	

Methyl ethyl ketone (78-93-3)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	>520 mg/L	
48 Hr EC50 Daphnia magna	5091 mg/L	
48 Hr EC50 Daphnia magna	4025 - 6440 mg/L [Static]	

1,1,1-Trichloroethane (71-55-6)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr LC50 Daphnia magna	>530 mg/L	
48 Hr EC50 Daphnia magna	2384 mg/L	
48 Hr EC50 Daphnia magna	9.7 - 12.8 mg/L [Static]	

Trichloroethene (79-01-6)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	2.2 mg/L	

Methylene chloride (75-09-2)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	1532 - 1847 mg/L [Static]	
48 Hr EC50 Daphnia magna	190 mg/L	

Tetrachloroethylene (127-18-4)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	6.1 - 9.0 mg/L [Static]	

Ethylacetate (141-78-6)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	560 mg/L [Static]	

Propylene glycol monomethyl ether (107-98-2)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	23300 mg/L	

Ethylene glycol, monobutyl ether acetate (112-07-2)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	37 mg/L	

Methyl acetate (79-20-9)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	1026.7 mg/L	

2-Ethoxyethanol (110-80-5)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	>10000 mg/L	

* * * Section 13 - Disposal Considerations * * *

Disposal Instructions

Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

US EPA Waste Number & Descriptions

D001. U220, U188, U056,U239, U019 , U165, U057, U161, U154, U002, U031, U159, U359, U112, U2280, U080, U2100, U226.

This product is a RCRA (US EPA Resource Conservation and Recovery Act) hazardous waste and is subject to the RCRA manifesting requirements. You must test your waste using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes. Based on available data, this information applies to the product as supplied to the user. Processing, use, or contamination by the user may change the waste code applicable to the disposal of this product.

* * * Section 14 - Transportation Information * * *

Emergency Response Guide Number

128 Reference *.North American Emergency Response Guidebook*

DOT

Shipping Name: Waste flammable liquids, toxic, n.o.s. (Contains: Xylenes (o-, m-, p- isomers), Tetrachloroethylene)
UN/NA #: UN1992 **Hazard Class:** 3, 6.1 **Packing Group:** II
Required Label(s): 3, 6.1
Additional Information: "RQ" should be added to the end of the proper shipping description if given the amount of the shipment and percentage of components the appropriate amounts are exceeded in a single package.

TDG

Shipping Name: Waste flammable liquids, toxic, n.o.s. (Contains: Xylenes (o-, m-, p- isomers), Tetrachloroethylene)
UN/NA #: UN1992 **Hazard Class:** 3, 6.1 **Packing Group:** II
Required Label(s): 3, (6.1)

IATA Information

No Classification Assigned.

IMDG Information

No Classification Assigned.

* * * Section 15 - Regulatory Information * * *

VOC (As Regulated)

80 to 100 WT%; 5.5 to 6.9 LB/US gal (664 to 830 g/l)
As per 40 CFR Part 51.100(s).

SARA Sections 311/312

SARA 302/304

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product does contain "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B:

Phenol (108-95-2)	500 lb lower TPQ; 10000 lb upper TPQ
Vinyl acetate (108-05-4)	1000 lb TPQ

SARA Section 313

Component Analysis

This product contains a "toxic" chemical subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

Ethyl benzene (100-41-4)	0.1 % de minimis concentration
Styrene (100-42-5)	0.1 % de minimis concentration
Toluene (108-88-3)	1.0 % de minimis concentration
Phenol (108-95-2)	1.0 % de minimis concentration
Hexane (110-54-3)	1.0 % de minimis concentration
Cyclohexane (110-82-7)	1.0 % de minimis concentration
Xylenes (o-, m-, p- isomers) (1330-20-7)	1.0 % de minimis concentration
Benzene (71-43-2)	0.1 % de minimis concentration
Naphthalene (91-20-3)	0.1 % de minimis concentration
Cyclohexanol (108-93-0)	1.0 % de minimis concentration
Methylisobutyl ketone (108-10-1)	1.0 % de minimis concentration
Methyl alcohol (67-56-1)	1.0 % de minimis concentration
Isopropyl alcohol (67-63-0)	1.0 % de minimis concentration (only if manufactured by the strong acid process, no supplier notification)
n-Butyl alcohol (71-36-3)	1.0 % de minimis concentration
Ethylene glycol (107-21-1)	1.0 % de minimis concentration
1,1,1-Trichloroethane (71-55-6)	1.0 % de minimis concentration
Trichloroethene (79-01-6)	0.1 % de minimis concentration

Methylene chloride (75-09-2)	0.1 % de minimis concentration
Tetrachloroethylene (127-18-4)	0.1 % de minimis concentration
2-Methoxyethanol (109-86-4)	1.0 % de minimis concentration
Vinyl acetate (108-05-4)	0.1 % de minimis concentration
2-Ethoxyethanol (110-80-5)	1.0 % de minimis concentration

CERCLA

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product contains the following "hazardous substance" listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4 with the following reportable quantities (RQ):

Ethyl benzene (100-41-4)	1000 lb final RQ; 454 kg final RQ
Styrene (100-42-5)	1000 lb final RQ; 454 kg final RQ
Toluene (108-88-3)	1000 lb final RQ; 454 kg final RQ
Phenol (108-95-2)	1000 lb final RQ; 454 kg final RQ
Hexane (110-54-3)	5000 lb final RQ; 2270 kg final RQ
Cyclohexane (110-82-7)	1000 lb final RQ; 454 kg final RQ
Xylenes (o-, m-, p- isomers) (1330-20-7)	100 lb final RQ; 45.4 kg final RQ
Benzene (71-43-2)	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)
Naphthalene (91-20-3)	100 lb final RQ; 45.4 kg final RQ
Cyclohexanone (108-94-1)	5000 lb final RQ; 2270 kg final RQ
Methylisobutyl ketone (108-10-1)	5000 lb final RQ; 2270 kg final RQ
Methyl alcohol (67-56-1)	5000 lb final RQ; 2270 kg final RQ
Acetone (67-64-1)	5000 lb final RQ; 2270 kg final RQ
n-Butyl alcohol (71-36-3)	5000 lb final RQ; 2270 kg final RQ
Ethylene glycol (107-21-1)	5000 lb final RQ; 2270 kg final RQ
Methyl ethyl ketone (78-93-3)	5000 lb final RQ; 2270 kg final RQ
1,1,1-Trichloroethane (71-55-6)	1000 lb final RQ; 454 kg final RQ
Trichloroethene (79-01-6)	100 lb final RQ; 45.4 kg final RQ
Methylene chloride (75-09-2)	1000 lb final RQ; 454 kg final RQ
Tetrachloroethylene (127-18-4)	100 lb final RQ; 45.4 kg final RQ
n-Butyl acetate (123-86-4)	5000 lb final RQ; 2270 kg final RQ
Ethylacetate (141-78-6)	5000 lb final RQ; 2270 kg final RQ
Vinyl acetate (108-05-4)	5000 lb final RQ; 2270 kg final RQ
2-Ethoxyethanol (110-80-5)	1000 lb final RQ; 454 kg final RQ

TSCA

All the components of this product are listed on, or are automatically included as "naturally occurring chemical substances" on, or are exempted from the requirement to be listed on, the TSCA Inventory.

Component Analysis

Component	CAS #	TSCA
Ethyl benzene	100-41-4	Yes
Styrene	100-42-5	Yes
Toluene	108-88-3	Yes
Phenol	108-95-2	Yes
Pentane	109-66-0	Yes
Hexane	110-54-3	Yes
Cyclohexane	110-82-7	Yes
Octanes	111-65-9	Yes
Nonane	111-84-2	Yes
Dodecane	112-40-3	Yes
Decane	124-18-5	Yes
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes
Heptane (n-)	142-82-5	Yes
Benzene	71-43-2	Yes
Naphthalene	91-20-3	Yes
Cyclohexanol	108-93-0	Yes
Cyclohexanone	108-94-1	Yes
Methylisobutyl ketone	108-10-1	Yes
1,2-Propylene glycol	57-55-6	Yes
Ethyl alcohol	64-17-5	Yes
Methyl alcohol	67-56-1	Yes
Isopropyl alcohol	67-63-0	Yes
Acetone	67-64-1	Yes
n-Propyl alcohol	71-23-8	Yes
n-Butyl alcohol	71-36-3	Yes
Ethylene glycol	107-21-1	Yes
Water	7732-18-5	Yes
Methyl ethyl ketone	78-93-3	Yes
Methyl n-amyl ketone	110-43-0	Yes
1,1,1-Trichloroethane	71-55-6	Yes
Trichloroethene	79-01-6	Yes
Methylene chloride	75-09-2	Yes
Tetrachloroethylene	127-18-4	Yes
n-Butyl acetate	123-86-4	Yes
n-Propyl acetate	109-60-4	Yes
Ethylacetate	141-78-6	Yes
Propylene glycol monomethyl ether	107-98-2	Yes
2-Methoxyethanol	109-86-4	Yes
Ethylene glycol, monobutyl ether acetate	112-07-2	Yes
Isopropyl acetate	108-21-4	Yes
2-Methoxyethyl acetate	110-49-6	Yes
Methyl acetate	79-20-9	Yes
Vinyl acetate	108-05-4	Yes
2-Ethoxyethanol	110-80-5	Yes

State Regulations

This product is not for sale or use in the State of California.

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	MA	MN	NJ	PA	CA
Ethyl benzene	100-41-4	Yes	Yes	Yes	Yes	Yes
Styrene	100-42-5	Yes	Yes	Yes	Yes	Yes
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
Phenol	108-95-2	Yes	Yes	Yes	Yes	Yes

Pentane	109-66-0	Yes	Yes	Yes	Yes	Yes
Hexane	110-54-3	No	Yes	Yes	Yes	Yes
Cyclohexane	110-82-7	Yes	Yes	Yes	Yes	Yes
Octanes	111-65-9	Yes	Yes	Yes	Yes	Yes
Nonane	111-84-2	Yes	Yes	Yes	Yes	Yes
Decane	124-18-5	No	No	No	Yes	Yes
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	Yes	Yes	Yes	Yes
Heptane (n-)	142-82-5	Yes	Yes	Yes	Yes	Yes
Benzene	71-43-2	Yes	Yes	Yes	Yes	Yes
Naphthalene	91-20-3	Yes	Yes	Yes	Yes	Yes
Cyclohexanol	108-93-0	Yes	Yes	Yes	Yes	Yes
Cyclohexanone	108-94-1	Yes	Yes	Yes	Yes	Yes
Methylisobutyl ketone	108-10-1	Yes	Yes	Yes	Yes	Yes
1,2-Propylene glycol	57-55-6	No	No	Yes	Yes	Yes
Ethyl alcohol	64-17-5	Yes	Yes	Yes	Yes	Yes
Methyl alcohol	67-56-1	Yes	Yes	Yes	Yes	Yes
Isopropyl alcohol	67-63-0	Yes	Yes	Yes	Yes	Yes
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes
n-Propyl alcohol	71-23-8	Yes	Yes	Yes	Yes	Yes
n-Butyl alcohol	71-36-3	Yes	Yes	Yes	Yes	Yes
Ethylene glycol	107-21-1	Yes	Yes	Yes	Yes	Yes
Methyl ethyl ketone	78-93-3	Yes	Yes	Yes	Yes	Yes
Methyl n-amyl ketone	110-43-0	Yes	Yes	Yes	Yes	Yes
1,1,1-Trichloroethane	71-55-6	Yes	Yes	Yes	Yes	Yes
Trichloroethene	79-01-6	Yes	Yes	Yes	Yes	Yes
Methylene chloride	75-09-2	Yes	Yes	Yes	Yes	Yes
Tetrachloroethylene	127-18-4	Yes	Yes	Yes	Yes	Yes
n-Butyl acetate	123-86-4	Yes	Yes	Yes	Yes	Yes
n-Propyl acetate	109-60-4	Yes	Yes	Yes	Yes	Yes
Ethylacetate	141-78-6	Yes	Yes	Yes	Yes	Yes
Propylene glycol monomethyl ether	107-98-2	Yes	Yes	Yes	Yes	Yes
2-Methoxyethanol	109-86-4	Yes	Yes	Yes	Yes	Yes
Ethylene glycol, monobutyl ether acetate	112-07-2	No	No	No	Yes	No
Isopropyl acetate	108-21-4	Yes	Yes	Yes	Yes	Yes
2-Methoxyethyl acetate	110-49-6	Yes	Yes	Yes	Yes	Yes
Methyl acetate	79-20-9	Yes	Yes	Yes	Yes	Yes
Vinyl acetate	108-05-4	Yes	Yes	Yes	Yes	Yes
2-Ethoxyethanol	110-80-5	Yes	Yes	Yes	Yes	Yes

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.

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 #	
Tetrachloroethylene	127-18-4	DOT regulated marine pollutant

Canadian Regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by the CPR.

Component Analysis

Component	**CAS #**	**CAN**
Ethyl benzene	100-41-4	DSL
Styrene	100-42-5	DSL
Toluene	108-88-3	DSL
Phenol	108-95-2	DSL
Pentane	109-66-0	DSL
Hexane	110-54-3	DSL
Cyclohexane	110-82-7	DSL
Octanes	111-65-9	DSL
Nonane	111-84-2	DSL
Dodecane	112-40-3	DSL
Decane	124-18-5	DSL
Xylenes (o-, m-, p- isomers)	1330-20-7	DSL
Heptane (n-)	142-82-5	DSL
Benzene	71-43-2	DSL
Naphthalene	91-20-3	DSL
Cyclohexanol	108-93-0	DSL
Cyclohexanone	108-94-1	DSL
Methylisobutyl ketone	108-10-1	DSL
1,2-Propylene glycol	57-55-6	DSL
Ethyl alcohol	64-17-5	DSL
Methyl alcohol	67-56-1	DSL
Isopropyl alcohol	67-63-0	DSL
Acetone	67-64-1	DSL
n-Propyl alcohol	71-23-8	DSL
n-Butyl alcohol	71-36-3	DSL
Ethylene glycol	107-21-1	DSL
Water	7732-18-5	DSL
Methyl ethyl ketone	78-93-3	DSL
Methyl n-amyl ketone	110-43-0	DSL
1,1,1-Trichloroethane	71-55-6	DSL
Trichloroethene	79-01-6	DSL
Methylene chloride	75-09-2	DSL
Tetrachloroethylene	127-18-4	DSL
n-Butyl acetate	123-86-4	DSL
n-Propyl acetate	109-60-4	DSL
Ethylacetate	141-78-6	DSL
Propylene glycol monomethyl ether	107-98-2	DSL

2-Methoxyethanol	109-86-4	DSL
Ethylene glycol, monobutyl ether acetate	112-07-2	DSL
Isopropyl acetate	108-21-4	DSL
2-Methoxyethyl acetate	110-49-6	DSL
Methyl acetate	79-20-9	DSL
Vinyl acetate	108-05-4	DSL
2-Ethoxyethanol	110-80-5	DSL

Canadian WHMIS Information

Class B2 - Flammable Liquid Class D1A - Contains a component that is acutely lethal. Class D2A - Contains component that may cause cancer. Class D2B - Irritating to eyes and skin.

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Ethyl benzene (100-41-4)	0.1 %
Styrene (100-42-5)	0.1 %
Toluene (108-88-3)	1 %
Phenol (108-95-2)	1 %
Pentane (109-66-0)	1 %
Hexane (110-54-3)	1 %
Cyclohexane (110-82-7)	1 %
Octanes (111-65-9)	1 %
Nonane (111-84-2)	1 %
Heptane (n-) (142-82-5)	1 %
Benzene (71-43-2)	0.1 %
Naphthalene (91-20-3)	1 %
Cyclohexanol (108-93-0)	1 %
Cyclohexanone (108-94-1)	0.1 %
Methylisobutyl ketone (108-10-1)	1 %
1,2-Propylene glycol (57-55-6)	1 %
Ethyl alcohol (64-17-5)	0.1 %
Methyl alcohol (67-56-1)	1 %
Isopropyl alcohol (67-63-0)	1 %
Acetone (67-64-1)	1 %
n-Propyl alcohol (71-23-8)	1 %
n-Butyl alcohol (71-36-3)	1 %
Ethylene glycol (107-21-1)	1 %
Methyl ethyl ketone (78-93-3)	1 %
Methyl n-amyl ketone (110-43-0)	1 %
1,1,1-Trichloroethane (71-55-6)	0.1 %
Trichloroethene (79-01-6)	1 %
Methylene chloride (75-09-2)	0.1 %
Tetrachloroethylene (127-18-4)	1 %
n-Butyl acetate (123-86-4)	1 %
n-Propyl acetate (109-60-4)	1 %
Ethylacetate (141-78-6)	1 %
Propylene glycol monomethyl ether (107-98-2)	1 %
2-Methoxyethanol (109-86-4)	0.1 %
Isopropyl acetate (108-21-4)	1 %
2-Methoxyethyl acetate (110-49-6)	0.1 %
Methyl acetate (79-20-9)	1 %
Vinyl acetate (108-05-4)	1 %
2-Ethoxyethanol (110-80-5)	0.1 %

Canadian Environmental Protection Act (CEPA)

All the components of this product are listed on, or are automatically included as "substance occurring in nature" on, or are exempted from the requirements to be listed on, the Canadian Domestic Substances List (DSL).

* * * Section 16 - Other Information * * *

Label/Other Information

Not available.

Revision Information

3 year regulatory update. This MSDS has been revised in the following sections: 1, 2, 3, 5, 8, 10, 11, 12, 15, 16.

Disclaimer

User assumes all risks incident to the use of this (these) product(s). To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers. The data contained on this sheet apply to the product(s) as supplied to the user.

End of Sheet 820014