SAFETY DATA SHEET

M34502 - ANSI - EN

CRUDE ETHYLENE DICHLORIDE

SDS No.: M34502 **SDS Revision Date:** 21-May-2015

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company Identification:	Occidental Chemical Corporation 5005 LBJ Freeway P.O. Box 809050 Dallas, TX 75380-9050 1-800-752-5151
24 Hour Emergency Telephone Number:	1-800-733-3665 or 1-972-404-3228 (USA); CHEMTREC (within USA and Canada): 1-800-424-9300; CHEMTREC (outside USA and Canada): +1 703-527-3887; CHEMTREC Contract No: CCN16186
To Request an SDS:	MSDS@oxy.com or 1-972-404-3245
Customer Service:	1-800-752-5151 or 1-972-404-3700
Product Identifier:	**CRUDE ETHYLENE DICHLORIDE**
Synonyms:	Chlorinated hydrocarbon mixture from reaction of Ethylene dichloride and Chlorine
Product Use:	Chemical Intermediate
Uses Advised Against:	None identified.

2. HAZARDS IDENTIFICATION

OSHA REGULATORY STATUS: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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EMERGENCY OVERVIEW:

Color: Amber
Physical State: Liquid
Appearance: Clear
Odor: Mildly sweet odor, Pungent odor

Signal Word: **DANGER**

MAJOR HEALTH HAZARDS: TOXIC IF SWALLOWED. HARMFUL IF INHALED. MAY CAUSE DROWSINESS OR DIZZINESS. HARMFUL IN CONTACT WITH SKIN. CAUSES SKIN IRRITATION. CAUSES EYE IRRITATION. CAUSES DAMAGE TO CENTRAL NERVOUS SYTEM (CNS), LIVER, KIDNEY, ADRENALS, RESPIRATORY SYSTEM. CAUSES DAMAGE TO LIVER, CENTRAL NERVOUS SYSTEM (CNS), THYROID THROUGH PROLONGED OR REPEATED EXPOSURE. MAY CAUSE DAMAGE TO KIDNEYS THROUGH PROLONGED OR REPEATED EXPOSURE. MAY CAUSE CANCER. SUSPECTED OF CAUSING GENETIC DEFECTS. SUSPECTED OF DAMAGING THE UNBORN CHILD.

PHYSICAL HAZARDS: HIGHLY FLAMMABLE LIQUID AND VAPOR.

AQUATIC TOXICITY: TOXIC TO AQUATIC LIFE. TOXIC TO AQUATIC LIFE WITH LASTING EFFECTS.

PRECAUTIONARY STATEMENTS: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Take precautionary measures against static discharge. Ground/ bond container and receiving equipment. Use explosion-proof equipment (eg. electrical, ventilating, and lighting). Keep away from heat/ sparks/ open flames/ hot surfaces. - No smoking. Use only non-sparking tools. Do not breathe gas, fumes, vapor, mist, or spray. Avoid contact with skin and eyes. Use personal protective equipment as required. Wear protective gloves, protective clothing, eye, and face protection. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment.

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GHS CLASSIFICATION:

GHS: PHYSICAL HAZARDS:	Flammable Liquid - Cat. 2 Highly Flammable
GHS: CONTACT HAZARD - SKIN:	Category 2 - Causes skin irritation.
GHS: CONTACT HAZARD - EYE:	Category 2B - Causes eye irritation
GHS: ACUTE TOXICITY - INHALATION:	Category 4 - Harmful if inhaled
GHS: ACUTE TOXICITY - ORAL:	Category 3 - Toxic if swallowed.
GHS: ACUTE TOXICITY - DERMAL:	Category 4 - Harmful in contact with skin.
GHS: TARGET ORGAN TOXICITY (SINGLE EXPOSURE):	Category 1 - Causes damage to: CNS, Liver, Kidney, and Adrenal Glands
GHS: TARGET ORGAN TOXICITY (SINGLE EXPOSURE):	Category 3 - May cause drowsiness or dizziness

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GHS: TARGET ORGAN TOXICITY (REPEATED EXPOSURE):	Category 1 - Causes damage to liver, central nervous system (CNS), thyroid through prolonged or repeated exposure
GHS: TARGET ORGAN TOXICITY (REPEATED EXPOSURE):	Category 2 - May cause damage to kidneys through prolonged or repeated exposure
GHS: CARCINOGENICITY:	Category 1B - May cause cancer.
GHS: GERM CELL MUTAGENICITY:	Category 2 - Suspected of causing genetic defects
GHS: REPRODUCTION TOXIN:	Category 2 - Suspected of damaging fertility or the unborn child
GHS: HAZARDOUS TO AQUATIC ENVIRONMENT - ACUTE HAZARD:	Category 2 - Toxic to aquatic life
GHS: HAZARDOUS TO AQUATIC ENVIRONMENT - CHRONIC HAZARD:	Category 2 - Toxic to aquatic life with long lasting effects
GHS: HAZARDOUS TO THE OZONE LAYER:	Category 1 - Harms the public health and the environment by destroying ozone in the upper atmosphere

UNKNOWN ACUTE TOXICITY: Listed below.

Unknown Acute Oral Toxicity:
100% of this product consists of ingredient(s) of known acute oral toxicity.

Unknown Acute Dermal Toxicity:
2% of this product consists of ingredient(s) of unknown acute dermal toxicity.

Unknown Acute Inhalation Toxicity:
4% of this product consists of ingredient(s) of unknown acute inhalation toxicity.

GHS SYMBOL: Flame, Skull and Crossbones, Health hazards, Exclamation mark

GHS SIGNAL WORD: **DANGER**

GHS HAZARD STATEMENTS:

GHS - Physical Hazard Statement(s)
Highly flammable liquid and vapor

GHS - Health Hazard Statement(s)
Toxic if inhaled
Harmful if swallowed
Causes skin irritation
Causes eye irritation
May cause drowsiness or dizziness
Causes damage to organs: (Central Nervous System(CNS), Liver, Kidneys, Adrenals)
Causes damage to organs through prolonged or repeated exposure: (Liver, Central Nervous System)
May cause damage to Renal System (Kidneys) through prolonged or repeated exposure
May cause cancer
Suspected of causing genetic defects

GHS - Environmental Hazard Statement(s)
Harmful to aquatic life

GHS - Precautionary Statement(s) - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Keep container tightly closed
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Ground/ bond container and receiving equipment
Use explosion-proof equipment (electrical equipment, ventilating equipment, lighting equipment, etc.)
Use only non-sparking tools
Take precautionary measures against static discharge
Do not breathe mist, vapors, or spray
Wear protective gloves, protective clothing, eye, and face protection
Use personal protective equipment as required
Wash thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Avoid release to the environment

GHS - Precautionary Statement(s) - Response
In case of fire: use dry chemical, carbon dioxide (CO2), foam, water fog or spray to extinguish
IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower
IF ON SKIN: Gently wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off immediately all contaminated clothing and wash it before reuse
IF INHALED: Remove person to fresh air and keep comfortable for breathing
Call a POISON CENTER or doctor/physician
Specific treatment (see Section 4 of the safety data sheet and/or the First Aid information on the product label)
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
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: call a POISON CENTER or doctor/physician

GHS - Precautionary Statement(s) - Storage
Keep container tightly closed
Store in a well-ventilated place. Keep cool
Store locked up

GHS - Precautionary Statement(s) - Disposal
Refer to manufacturer/supplier for information on recovery/recycling. Dispose of contents and container in accordance with applicable local, regional, national, and/or international regulations.

Hazards Not Otherwise Classified (HNOC)
May be fatal if swallowed
This material may be readily absorbed through the skin

See Section 11: TOXICOLOGICAL INFORMATION

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Chlorinated hydrocarbon mixture from reaction of Ethylene dichloride and Chlorine

Component	Percent [%]	CAS Number
Ethylene Dichloride	0.1 - 80	107-06-2
Tetrachloroethylene [Perc]	0.1 - 20	127-18-4
Carbon Tetrachloride	0.1 - 10	56-23-5
Trichloroethylene	0.1 - 5	79-01-6
Hexachlorobutadiene [1,3-Butadiene, 1,1,2,3,4,4-hexachloro-]	0.1 - 5	87-68-3
Hexachloroethane	0.1 - 2	67-72-1
Phenol, 4-(1,1-dimethylpropyl)-	0.1 - 1	80-46-6
1,1,2-Trichloroethane	0.1 - 1	79-00-5
Decachlorobiphenyl	0 - 1	2051-24-3
Hexachlorobenzene	0.1 - 1	118-74-1
p-Dichlorobenzene	0.1 - 1	106-46-7
o-Dichlorobenzene	0.1 - 1	95-50-1
Benzene, 1,2,3-trichloro-	0.1 - 1	87-61-6
Benzene, 1,2,3,5-tetrachloro-	0.1 - 1	634-90-2

4. FIRST AID MEASURES

INHALATION: If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician. See Notes to Physician below and Section 11 for more information.

SKIN CONTACT: If on skin or hair, wash with plenty of soap and water. If skin irritation occurs: Get medical advice/ attention. If no skin irritation, and you feel unwell, contact a poison center or doctor/physician. Take off contaminated clothing and wash before reuse. See Notes to Physician below and Section 11 for more information.

EYE CONTACT: 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.

INGESTION: If swallowed, rinse mouth. Contact a poison center or doctor/physician if you feel unwell.

Most Important Symptoms/Effects (Acute and Delayed) :.

Acute Symptoms/Effects: Listed below.
Inhalation (Breathing): Respiratory System Effects: Central Nervous System (CNS) effects are characteristic following inhalation of chlorinated hydrocarbons and can range from lightheadedness at low level exposures to loss of consciousness at high levels. CNS effects are an early warning that exposure to high levels has occurred and there is risk of cardiac effects (palpitations, low blood pressure, arrhythmia, arrest). CNS effects include the following symptoms: abdominal pain, nausea, vomiting, headache, lightheadedness, blurry or double vision, personality changes, weakness, slurred speech, stupor, incoordination (disequilibrium, ataxia), coma, and respiratory arrest. May irritate upper airways.
Skin: Skin Irritation. Skin exposure may cause irritation, rough, red, dry skin, edema, necrosis. Burning and pricking sensations, small peripheral blisters may occur after exposure.
Eye: Eye Irritation. Eye exposure may cause irritation, tearing, pain, conjunctivitis, clouding of cornea.
Ingestion (Swallowing): Gastrointestinal System Effects: May be fatal if swallowed. Ingesting this material may cause gastrointestinal irritation, nausea. vomiting, headache, breathing difficulty, reduced blood pressure, internal bleeding, cyanosis, weak and rapid pulse, Central Nervous System (CNS) depression, and Central Nervous System (CNS) symptoms such as tremor, nystagmus and memory problems. A bluish/purple discoloration of the skin may occur when ingested. May cause low or no urine output and severe liver injury.
Other Health Effects: Ethylene dichloride (EDC) is a central nervous system depressant and can damage the liver, kidneys, adrenal glands, and respiratory system. May cause acute adrenal failure. May cause liver failure. May cause renal (kidney) failure. May cause eye damage such as corneal damage, decreased vision. May cause delayed pulmonary, kidney, liver damage. May cause asthma or reactive airway like symptoms. Exposure may cause other chronic health effects.

Delayed Symptoms/Effects:
- May cause chemical pneumonitis
- Reduced renal output (oliguria)
- Elevation of liver enzymes
- Renal (kidney) failure
- Liver failure
- May cause acute adrenal failure
- Pulmonary edema, and liver and kidney injury resulting in low or no urine output may be delayed by days
- May cause chronic dermatitis - rough, dry, red skin due to extraction of fatty materials
- May cause dermal hypersensitivity
- May cause eye damage such as corneal damage, decreased vision
- Serious ingestions may cause widespread organ damage to kidney, liver, adrenal glands, as well as gastrointestinal bleeding
- A bluish/purple discoloration of the skin may occur when ingested
- Liver and kidney injury may be delayed by days
- Prolonged exposures can result in memory and concentration impairment, vision disturbances, dizziness, irritability, ataxia (difficulty walking), sleep disturbances, and peripheral neuropathy
- May cause cancer
- Suspected of causing genetic defects

Target Organ Effects: This material is a Central Nervous System (CNS) depressant and can damage the liver, kidneys, and adrenal glands.

Interaction with Other Chemicals Which Enhance Toxicity: May potentiate other agents that cause central nervous system (CNS) and respiratory system depression, such as alcohol, opiates. General and liver toxicity is significantly increased by alcohols, ketones and other chemicals that use the same metabolic pathways: acetaminophen, phenobarbital, methamphetamine, barbiturates, brominated or chlorinated solvents, DDT, PBB, chlordecone, nicotine, carbon disulfide, or other alkyl disulfides. Hypoxia may also increase sensitivity to toxicity. Catecholamine administration MAY pose increased risk of cardiac arrhythmias.

Medical Conditions Aggravated by Exposure: May increase potential for cardiac arrhythmia. Persons with alcoholism, liver disorders, kidney disorders, respiratory system disorders may be more susceptible to toxicity.

Protection of First-Aiders: Do not breathe gas, fumes, vapor, mist, or spray. Protect yourself by avoiding contact with this material. Use personal protective equipment. Refer to Section 8 for specific personal protective equipment recommendations. Consider the possibility of high levels of gas in confined/unventilated spaces or low-lying areas.

Notes to Physician: For ingestion, nasogastric aspiration is recommended if volume ingested is of sufficient volume to aspirate. Protect the airway. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material.

5. FIRE-FIGHTING MEASURES

Fire Hazard: Severe fire hazard. Vapor/air mixtures are explosive. The vapor is heavier than air. Vapors or gases may ignite at distant sources and flash back.

Extinguishing Media: Use dry chemical, carbon dioxide, foam, or water spray.

Fire Fighting: Water may be ineffective as an extinguishing media. Wear NIOSH approved positive-pressure self-contained breathing apparatus operated in pressure demand mode. Eliminate all sources of ignition. Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Flood with fine water spray. Do not scatter spilled material with high-pressure water streams. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

Component	Immediately Dangerous to Life/ Health (IDLH)
Ethylene Dichloride 107-06-2	50 ppm IDLH
Tetrachloroethylene [Perc] 127-18-4	150 ppm IDLH
Carbon Tetrachloride 56-23-5	200 ppm IDLH
Trichloroethylene 79-01-6	1000 ppm IDLH
Hexachloroethane 67-72-1	300 ppm IDLH
1,1,2-Trichloroethane 79-00-5	100 ppm IDLH
p-Dichlorobenzene 106-46-7	150 ppm IDLH
o-Dichlorobenzene 95-50-1	200 ppm IDLH

Hazardous Combustion Products:	Oxides of carbon, Chlorine, Hydrochloric acid, Phosgene, Hydrogen chloride
Sensitivity to Mechanical Impact:	Not sensitive.
Sensitivity to Static Discharge:	Electrostatic charges may build up during handling and may form ignitable vapor-air mixtures in storage containers. Ground equipment in accordance with industry standards and best practices such as NFPA 77 [Recommended Practices on Static Electricity (2007)] and American Petroleum Institute (API) RP Recommended Practice 2003 [Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents (2008)].
Lower Flammability Level (air):	6.2 %
Upper Flammability Level (air):	15.6 %
Flash point:	55 °F (13 °C)
Method:	TCC - Tag Closed Cup TCC
Auto-ignition Temperature:	775 °F (413 °C)

GHS: PHYSICAL HAZARDS:
- Flammable Liquid - Cat. 2 Highly Flammable

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:
This material is highly flammable, handle with extreme care. Evacuate unnecessary personnel and eliminate all sources of ignition. Evacuation of surrounding area may be necessary for large spills. Remove sources of ignition. Vapors or gases may ignite at distant ignition sources and flash back. Ventilate closed spaces before entering. Do not breathe vapors, mist, or spray. Avoid contact with skin and eyes. Wear appropriate personal protective equipment recommended in Section 8, Exposure Controls / Personal Protection, of the SDS. Stay upwind and keep out of low areas. Most vapors are heavier than air and will spread along ground and collect in low or confined areas (drains, basements, tanks).

Methods and Materials for Containment and Cleaning Up:
Take action to protect personnel. Evacuate unnecessary and unprotected personnel. Isolate hazard area and deny entry. Shut off ventilation system if needed. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Ventilate closed spaces before entering. Stop leak if possible without personal risk. Completely contain spilled materials with dikes, sandbags, etc. Remove contaminated soil or collect with appropriate, noncombustible absorbent and place into suitable container. Keep container tightly closed and properly labeled. Liquid material may be removed with a properly rated vacuum truck. Dispose of in accordance with all applicable regulations.

Environmental Precautions:
This material is toxic to aquatic life. This material is very toxic to aquatic life with long lasting effects. This material harms the public health and the environment by destroying ozone in the upper atmosphere. Keep out of water supplies, sewers and soil. Avoid discharge into drains, surface water or groundwater. Releases should be reported, if required, to appropriate agencies.

7. HANDLING AND STORAGE

Precautions for Safe Handling:
This material is highly flammable, handle with extreme care. Use only equipment and hoses approved for this material. Keep away from heat, sparks, flame and other sources of ignition. Take precautionary measures against static discharge. Use non-sparking tools and equipment. Ground/bond container and receiving equipment. Use only explosion-proof equipment. Ensure adequate ventilation, especially in confined areas. Most vapors are heavier than air and will spread along ground and collect in low or confined areas (drains, basements, tanks). Do not reuse drum without recycling or reconditioning in accordance with any applicable federal, state or local laws. Do not use cutting or welding torches, open flames or electric arcs on empty or full containers. Avoid breathing vapor or mist. Avoid contact with skin, eyes and clothing. Do not taste or swallow. Wear personal protective equipment as described in Exposure Controls/Personal Protection (Section 8) of the SDS. Wash thoroughly after handling. Do not eat, drink or smoke in areas where this material is used.

Safe Storage Conditions:
Store and handle in accordance with all current regulations and standards. Keep away from heat, sparks, pilot lights, welding operations and open flame. Keep container tightly closed and properly labeled. Store in a cool, dry area. Store in a well-ventilated area. Prevent water or moist air from entering storage tanks or containers. Do not store in aluminum container or use aluminum fittings or transfer lines. Protect from sunlight. Keep separated from incompatible substances (see below or Section 10 of the Safety Data Sheet). May be subject to storage regulations: U.S. OSHA 29 CFR 1910.106.

Incompatibilities/ Materials to Avoid:
Acids, Bases, Alkali metals such as aluminum, Amines, Oxidizing agents, High temperature sources, Pure oxygen, Strong UV light (welding arcs), Metals

GHS: PHYSICAL HAZARDS:
- Flammable Liquid - Cat. 2 Highly Flammable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Regulatory Exposure Limit(s): Listed below for the product components that have regulatory occupational exposure limits (OEL's).

Component	OSHA Final PEL TWA	OSHA Final PEL STEL	OSHA Final PELCeiling
Ethylene Dichloride 107-06-2	50 ppm	-----	100 ppm
Tetrachloroethylene [Perc] 127-18-4	100 ppm	-----	200 ppm

Carbon Tetrachloride 56-23-5	10 ppm	-----	25 ppm
Trichloroethylene 79-01-6	100 ppm	-----	200 ppm
Hexachloroethane 67-72-1	1 ppm 10 mg/m³	-----	-----
1,1,2-Trichloroethane 79-00-5	10 ppm 45 mg/m³	-----	-----
o-Dichlorobenzene 95-50-1	-----	-----	50 ppm 300 mg/m³
p-Dichlorobenzene 106-46-7	75 ppm 450 mg/m³	-----	-----

OEL: Occupational Exposure Limit; OSHA: United States Occupational Safety and Health Administration; PEL: Permissible Exposure Limit; TWA: Time Weighted Average; STEL: Short Term Exposure Limit

NON-REGULATORY EXPOSURE LIMIT(S): Listed below for the product components that have non-regulatory occupational exposure limits (OEL's).

Component	CAS Number	ACGIH TWA	ACGIH STEL	ACGIH Ceiling	OSHA TWA (Vacated)	OSHA STEL (Vacated)	OSHA Ceiling (Vacated)
Ethylene Dichloride	107-06-2	10 ppm	-----	-----	1 ppm 4 mg/m³	2 ppm 8 mg/m³	-----
Tetrachloroethylene [Perc]	127-18-4	25 ppm	100 ppm	-----	25 ppm 170 mg/m³	-----	-----
Carbon Tetrachloride	56-23-5	5 ppm	10 ppm	-----	2 ppm 12.6 mg/m³	-----	-----
Trichloroethylene	79-01-6	50 ppm	25 ppm	-----	50 ppm 270 mg/m³	200 ppm 1080 mg/m³	-----
Hexachlorobutadiene [1,3-Butadiene, 1,1,2,3,4,4-hexachloro-]	87-68-3	0.02 ppm	-----	-----	0.02 ppm 0.24 mg/m³	-----	-----
Hexachloroethane	67-72-1	1 ppm	-----	-----	1 ppm 10 mg/m³	-----	-----
1,1,2-Trichloroethane	79-00-5	10 ppm	-----	-----	10 ppm 45 mg/m³	-----	-----
Hexachlorobenzene	118-74-1	0.002 mg/m³	-----	-----	-----	-----	-----
o-Dichlorobenzene	95-50-1	25 ppm	50 ppm	-----	-----	-----	50 ppm 300 mg/m³
p-Dichlorobenzene	106-46-7	10 ppm	-----	-----	75 ppm 450 mg/m³	110 ppm 675 mg/m³	-----

- The Non-Regulatory United States Occupational Safety and Health Administration (OSHA) limits, if shown, are the Vacated 1989 PEL's (vacated by 58 FR 35338, June 30, 1993).

- The American Conference of Governmental Industrial Hygienists (ACGIH) is a voluntary organization of professional industrial hygiene personnel in government or educational institutions in the United States. The ACGIH develops and publishes recommended occupational exposure limits each year called Threshold Limit Values (TLVs) for hundreds of chemicals, physical agents, and biological exposure indices.

ENGINEERING CONTROLS: Use explosion proof equipment and lighting in classified/controlled areas. Provide local exhaust ventilation where vapor or mist may be generated. Provide sufficient general/local exhaust ventilation in pattern/volume to control inhalation exposures below applicable exposure limits and to keep areas below explosive vapor concentrations.

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Wear safety glasses with side-shields. Wear chemical safety goggles with a face-shield to protect against eye and skin contact when appropriate. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin and Body Protection: Wear chemical resistant clothing and footwear to prevent skin contact. Contaminated clothing should be removed, then discarded or laundered. Always place pants legs over boots.

Hand Protection: Wear appropriate chemical resistant gloves. Consult a glove supplier for assistance in selecting an appropriate chemical resistant glove.

Protective Material Types: Viton®, Polyvinyl alcohol (PVA)

Respiratory Protection: Ethylene Dichloride (EDC) is the controlling component in this mixture. When the controlling component is controlled below it's exposure level, all the other components will be controlled below their corresponding exposure levels. Where vapor or mist concentration exceeds or is likely to exceed applicable exposure limits, a NIOSH approved respirator with organic vapor cartridge filter(s) is required. When an air-purifying respirator is not adequate, for exposures above the IDLH, or for spills and/or emergencies of unknown concentrations, a NIOSH approved self-contained breathing apparatus or airline respirator with full-face piece with auxiliary self-contained escape pack is required. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

Component	Immediately Dangerous to Life/ Health (IDLH)
Ethylene Dichloride 107-06-2	50 ppm IDLH
Tetrachloroethylene [Perc] 127-18-4	150 ppm IDLH
Carbon Tetrachloride 56-23-5	200 ppm IDLH
Trichloroethylene 79-01-6	1000 ppm IDLH
Hexachloroethane 67-72-1	300 ppm IDLH
1,1,2-Trichloroethane 79-00-5	100 ppm IDLH
p-Dichlorobenzene 106-46-7	150 ppm IDLH
o-Dichlorobenzene 95-50-1	200 ppm IDLH

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Appearance:	Clear
Color:	Amber
Odor:	Mildly sweet odor, Pungent odor
Odor Threshold [ppm]:	No data available.
Decomposition Temperature:	No data available
Boiling Point/Range:	No data available
Freezing Point/Range:	No data available.
Melting Point/Range:	Not applicable to liquids
Vapor Pressure:	<100 mmHg @ 20 ºC
Vapor Density (air=1):	>1
Relative Density/Specific Gravity (water=1):	1.2 - 1.4
Water Solubility:	0.8 %
pH:	No data available
VOC Content (%):	100 %
Volatility:	55 - 95% by volume
Evaporation Rate (ether=1):	No data available
Partition Coefficient (n-octanol/water):	No data available
Flash point:	55 °F (13 °C)
Method:	TCC - Tag Closed Cup TCC
Flammability (solid, gas):	Highly flammable
Lower Flammability Level (air):	6.2 %
Upper Flammability Level (air):	15.6 %
Auto-ignition Temperature:	775 °F (413 °C)
Viscosity:	No data available

10. STABILITY AND REACTIVITY

Reactivity: Not reactive under normal temperatures and pressures.

Chemical Stability: Stable at normal temperatures and pressures.

Possibility of Hazardous Reactions:
Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat. Avoid contact with incompatible substances and conditions due to generation of phosgene and other toxic and irritating substances. Strong UV light such as welding arcs may generate phosgene. Solvent decomposition occurs when catalyzed by metal chlorides which can be produced by reaction of hydrochloric acid and metals.

Conditions to Avoid:
(e.g., static discharge, shock, or vibration) -. To avoid ignition by static discharge, equipment must be bonded and grounded.

Incompatibilities/ Materials to Avoid:
Acids. Bases. Alkali metals such as aluminum. Amines. Oxidizing agents. High temperature sources. Pure oxygen. Strong UV light (welding arcs). Metals.

Hazardous Decomposition Products: Oxides of carbon (Carbon monoxide, Carbon dioxide), Hydrochloric acid, Phosgene, Hydrogen chloride, Chlorine

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA:

PRODUCT TOXICITY DATA: CRUDE ETHYLENE DICHLORIDE (EDC)

LD50 Oral:	LD50 Dermal:	LC50 Inhalation:
296 mg/kg - Oral Acute Toxicity Estimate (ATE)	1805 mg/kg - Dermal Acute Toxicity Estimate (ATE)	4.8 mg/l - Inhalation Acute Toxicity Estimate (ATE)

COMPONENT TOXICITY DATA:

Note: The component toxicity data is populated by the LOLI database and may differ from the product toxicity data given.

Component	LD50 Oral:	LD50 Dermal:	LC50 Inhalation:
Ethylene Dichloride 107-06-2	680 mg/kg (Rat)	4890 mg/kg (Rabbit)	4 mg/L (6 hr-Rat)
Tetrachloroethylene [Perc] 127-18-4	2629 mg/kg (Rat)	2800 mg/kg (Mouse)	27.8 mg/L (4 hr-Rat)
Carbon Tetrachloride 56-23-5	2350 mg/kg (Rat)	5070 mg/kg (Rat)	8000 ppm (4 hr-Rat)
Trichloroethylene 79-01-6	5400 - 7200 mg/kg (Rat)	29000 mg/kg (Rabbit)	26 mg/L (4 hr-Rat)
Hexachlorobutadiene [1,3-Butadiene, 1,1,2,3,4,4-hexachloro-] 87-68-3	46 mg/kg (Rat)	1120 mg/kg (Rabbit)	0.107 mg/L (6 hr-Mouse)
Hexachloroethane 67-72-1	4460 mg/kg (Rat)	32000 mg/kg (Rabbit)	-----
1,1,2-Trichloroethane 79-00-5	836 mg/kg (Rat)	5371 mg/kg (Rabbit)	2.78 mg/L (8 hr-Rat)
Hexachlorobenzene 118-74-1	3500 mg/kg (Rat)	-----	-----
p-Dichlorobenzene 106-46-7	2950 mg/kg (Mouse)	-----	-----
o-Dichlorobenzene 95-50-1	1516 mg/kg (Rat)	10 g/kg (Rabbit)	9.2 mg/L (6 hr-Rat)

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POTENTIAL HEALTH EFFECTS:

Eye contact:	Eye contact may cause irritation, pain, conjunctivitis, tearing, clouding of cornea.
Skin contact:	Skin contact may cause irritation, rough, red, dry skin, edema, blisters. Prolonged skin contact may cause burns and blisters. May be absorbed through the skin.
Inhalation:	Inhalation of this material may cause lightheadedness, loss of consciousness, cardiotoxicity, palpitations, low blood pressure, arrhythmia, arrest, nausea, vomiting, abdominal pain, headache, blurry vision, double vision, alteration of light perception, personality changes, weakness, stupor, incoordination (disequilibrium, ataxia), coma, respiratory arrest. May irritate upper airways.
Ingestion:	May be fatal if swallowed. Ingestion of this material may cause gastrointestinal irritation, central nervous system (CNS) depression, central nervous system symptoms such as tremor, nystagmus and memory problems, nausea, vomiting, headache, breathing difficulty, reduced blood pressure, internal bleeding, cyanosis, weak and rapid pulse. Serious ingestions may cause widespread organ damage to kidney, liver, adrenal glands, as well as gastrointestinal bleeding.
Chronic Effects:	Chronic overexposure may cause adverse kidney and liver effects. Repeated or prolonged contact with the liquid can produce dermatitis. Rats and mice given this material by gavage developed tumors. Prolonged exposures can result in memory and concentration impairment, vision disturbances, dizziness, irritability, ataxia (difficulty walking), sleep disturbances, and peripheral neuropathy. May cause cancer. Suspected of causing genetic defects. Suspected of damaging fertility or the unborn child. May cause chemical pneumonitis. Repeated or prolonged skin contact may result in dermatitis. May cause dermal hypersensitivity.

SIGNS AND SYMPTOMS OF EXPOSURE:

Inhalation (Breathing): Respiratory System Effects: Central Nervous System (CNS) effects are characteristic following inhalation of chlorinated hydrocarbons and can range from lightheadedness at low level exposures to loss of consciousness at high levels. CNS effects are an early warning that exposure to high levels has occurred and there is risk of cardiac effects (palpitations, low blood pressure, arrhythmia, arrest). CNS effects include the following symptoms: abdominal pain, nausea, vomiting, headache, lightheadedness, blurry or double vision, personality changes, weakness, slurred speech, stupor, incoordination (disequilibrium, ataxia), coma, and respiratory arrest. May irritate upper airways.

Skin: Skin Irritation. Skin exposure may cause irritation, rough, red, dry skin, edema, necrosis. Burning and pricking sensations, small peripheral blisters may occur after exposure.

Eye: Eye Irritation. Eye exposure may cause irritation, tearing, pain, conjunctivitis, clouding of cornea.

Ingestion (Swallowing): Gastrointestinal System Effects: May be fatal if swallowed. Ingesting this material may cause gastrointestinal irritation, nausea. vomiting, headache, breathing difficulty, reduced blood pressure, internal bleeding, cyanosis, weak and rapid pulse, Central Nervous System (CNS) depression, and Central Nervous System (CNS) symptoms such as tremor, nystagmus and memory problems. A bluish/purple discoloration of the skin may occur when ingested. May cause low or no urine output and severe liver injury.

Other Health Effects: Ethylene dichloride (EDC) is a central nervous system depressant and can damage the liver, kidneys, adrenal glands, and respiratory system. May cause acute adrenal failure. May cause liver failure. May cause renal (kidney) failure. May cause eye damage such as corneal damage, decreased vision. May cause delayed pulmonary, kidney, liver damage. May cause asthma or reactive airway like symptoms. Exposure may cause other chronic health effects.

TOXICITY:
Chlorinated hydrocarbons can act as simple asphyxiants, posing a risk by their displacement of oxygen in the air, thus causing hypoxic environmental conditions leading to reduced oxygen uptake and hypoxemia. Some direct toxicity is also likely, especially at very high exposure levels. The toxic mechanisms include direct myocardial depression and sensitization of the myocardium to endogenous catecholamines. With very high level, as in inhalation abuse, both direct toxicity and reduced oxygen concentrations may exist and can interact to further increase risk. Sudden death may occur. Effects of low level, accidental exposure to chlorinated aliphatic hydrocarbons are usually limited to mild upper respiratory tract irritation and/or mild CNS effects. Direct pulmonary toxicity is usually of little clinical concern; however, moderate to high levels of exposure may result in significant upper airway irritation, pneumonitis and CNS depressant effects. Very high exposures may result in severe respiratory depression or failure. Cardiac arrhythmias are generally associated with moderate to sever exposures. Exposure to high levels produces direct liver and kidney toxicity. The onset of elevated liver enzymes and indicators of renal impairment may be delayed. Components of this mixture contributing to delayed renal impairment may also cause delayed pulmonary edema. This material contains Hexachlorobutadiene and 1,1,2 Trichlorothane which may be absorbed through the skin to produce toxic effects on the liver, kidney, and central nervous system (CNS). This material also contains Hexachlorobenzene, which may cause porphyrin effects. This material contains listed carcinogens: ethylene dichloride, tetrachloroethylene, hexachlorobenzene, trichloroethylene, hexachlorothane, dichlorobenzne, and carbon tetrachloride. REPRODCUTIVE EFFECTS DATA: This material contains Hexachlorobenzene which may affect the development of the fetus (teratogenic effects).

Interaction with Other Chemicals Which Enhance Toxicity: May potentiate other agents that cause central nervous system (CNS) and respiratory system depression, such as alcohol, opiates. General and liver toxicity is significantly increased by alcohols, ketones and other chemicals that use the same metabolic pathways: acetaminophen, phenobarbital, methamphetamine, barbiturates, brominated or chlorinated solvents, DDT, PBB, chlordecone, nicotine, carbon disulfide, or other alkyl disulfides. Hypoxia may also increase sensitivity to toxicity. Catecholamine administration MAY pose increased risk of cardiac arrhythmias.

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GHS HEALTH HAZARDS:

GHS: ACUTE TOXICITY - ORAL: Category 3 - Toxic if swallowed.

GHS: ACUTE TOXICITY - DERMAL: Category 4 - Harmful in contact with skin.

GHS: ACUTE TOXICITY - INHALATION: Category 4 - Harmful if inhaled.

GHS: CONTACT HAZARD - EYE: Category 2B - Causes eye irritation

GHS: CONTACT HAZARD - SKIN: Category 2 - Causes skin irritation

Skin Absorbent / Dermal Route? Yes.

GHS: CARCINOGENICITY:
Category 1B - May cause cancer.

CRUDE ETHYLENE DICHLORIDE

Carcinogenicity comment: This material contains listed carcinogens: ethylene dichloride, tetrachloroethylene, hexachlorobenzene, trichloroethylene, hexachlorothane, dichlorobenzne, and carbon tetrachloride. Ethylene Dichloride (EDC): Rats and mice exposed to ethylene dichloride via inhalation did not show increased development of tumors. Benign mammary tumors were increased in the female animals, but these were ascribed to a general stress rather than a tumorigenic action. Rats receiving this material by gavage developed a significant increase in hemangiosarcomas of the circulatory system and tumors in the forestomach. Mice receiving the material by gavage developed lymphomas, lung tumors, hepatocellular carcinomas, and mammary and uterine adenocarcinomas.

Component	NTP:	IARC (GROUP 1):	IARC (GROUP 2):	OSHA:
Ethylene Dichloride	Reasonably Anticipated To Be A Human Carcinogen	Not listed	Group 2A	Listed
Tetrachloroethylene [Perc]	Reasonably Anticipated To Be A Human Carcinogen	Not listed	Group 2	Listed
Carbon Tetrachloride	Reasonably Anticipated To Be A Human Carcinogen	Not listed	Group 2	Listed
Trichloroethylene	Reasonably Anticipated To Be A Human Carcinogen	Group 1	Not listed	Listed
Hexachloroethane	Reasonably Anticipated To Be A Human Carcinogen	Not listed	Group 2	Listed
Decachlorobiphenyl	Reasonably Anticipated To Be A Human Carcinogen	Group 1	Not listed	Listed
Hexachlorobenzene	Reasonably Anticipated To Be A Human Carcinogen	Not listed	Group 2	Listed
p-Dichlorobenzene	Reasonably Anticipated To Be A Human Carcinogen	Not listed	Group 2	Listed

SPECIFIC TARGET ORGAN TOXICITY (Single Exposure):
Category 1 - Central Nervous System (CNS), Liver, Kidney, Adrenals
Category 3 - Narcotic Effects

SPECIFIC TARGET ORGAN TOXICITY (Repeated or Prolonged Exposure):
Category 1 - Liver, Kidneys, Central Nervous System (CNS), Thyroid
Category 2 - Kidneys

MUTAGENIC DATA:
Category 2 - Suspected of causing genetic defects. One or more components in this material have tested positive in mutagenicity studies.

REPRODUCTIVE TOXICITY:
Category 2 - Suspected of damaging fertility or the unborn child. Based on rodent studies ethylene dichloride is not expected to increase the risk of congenital anomalies. Reproductive effects were seen in carbon tetrachloride rodent studies.

ASPIRATION HAZARD:
Not classified as an aspiration hazard per GHS criteria

12. ECOLOGICAL INFORMATION

Product Information:
No data is available on the mixture itself.

ECOTOXICITY DATA:

FATE AND TRANSPORT:

BIODEGRADATION: This material is believed to be subject to biodegradation

PERSISTENCE: This material has not been tested, but based on the components it is believed not to persist in the environment

BIOCONCENTRATION: This material contains constituents that may bioaccumulate.

ADDITIONAL ECOLOGICAL INFORMATION: This material is toxic to aquatic life. This product is toxic to aquatic life with long lasting effects. This material harms the public health and the environment by destroying ozone in the upper atmosphere. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product into sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your local or regional regulatory water boards and/or other appropriate regulatory offices.

13. DISPOSAL CONSIDERATIONS

Waste from material:
Reuse or reprocess, if possible. Keep out of water supplies, sewers and soil. Dispose in accordance with all applicable regulations. May be subject to disposal regulations.

Container Management:
Dispose of container in accordance with applicable local, regional, national, and/or international regulations. Container rinsate must be disposed of in compliance with applicable regulations.

14. TRANSPORT INFORMATION

LAND TRANSPORT

U.S. DOT 49 CFR 172.101:

Status: This material is subject to Hazardous Material Regulations. In case of a release, additional reporting requirements may be required when a single package contains a reportable quantity of the hazardous substances listed below.

UN NUMBER:	UN1992
PROPER SHIPPING NAME:	Flammable Liquids, toxic, n.o.s. (ETHYLENE DICHLORIDE, TETRACHLOROETHYLENE)
HAZARD CLASS/ DIVISION:	3
PACKING GROUP:	II
LABELING REQUIREMENTS:	3, 6.1
MARINE POLLUTANT:	Trichloroethylene Carbon tetrachloride Hexachlorobutadiene 1,2,3-Trichlorobenzene o-Dichlorobenzene p-Dichlorobenzene Polychlorinated biphenyls
RQ (lbs):	Ethylene dichloride 100 lb(s) (45.4 kg(s)) Perchloroethylene 100 lb(s) (45.4 kg(s)) Trichloroethylene 100 lb(s) (45.4 kg(s)) Hexachloroethane 100 lb(s) (45.4 kg(s)) 1,4-Dichlorobenzene 100 lb(s) (45.4 kg(s)) 1,1,2-Trichloroethane 100 lb(s) (45.4 kg(s)) Carbon tetrachloride 10 lb(s) (4.54 kg(s)) Hexachlorobenzene 10 lb(s) (4.54 kg(s)) Hexachlorobutadiene 1 lb(s) (0.454 kg(s)) o-Dichlorobenzene 100 lb(s) (45.4 kg(s))

ADDITIONAL INFORMATION: Transport by vessel requires flashpoint on shipping papers.

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:

Status: This material is subject to Canadian Dangerous Goods regulations. In case of a release, immediate reporting may be required when a single package contains components meeting the hazard class and quantity detailed in TDG Section 8.1.

*** NOTE:** Transport by vessel requires flashpoint on shipping papers.

UN NUMBER:	UN1992
SHIPPING NAME:	Flammable liquids, toxic, n.o.s. (ETHYLENE DICHLORIDE, TETRACHLOROETHYLENE)
CLASS OR DIVISION:	3
PACKING/RISK GROUP:	II
LABELING REQUIREMENTS:	3, 6.1
CAN. MARINE POLLUTANT:	Trichloroethylene Carbon Tetrachloride Hexachlorobutadiene 1,2,3-Trichlorobenzene o-Dichlorobenzene p-Dichlorobenzene Polychlorinated biphenyls

MARITIME TRANSPORT (IMO / IMDG)

*** NOTE:** Transport by vessel requires flashpoint on shipping papers.

Status - IMO / IMDG: This material is subject to IMO/IMDG Dangerous Goods regulations

UN NUMBER: UN1992

PROPER SHIPPING NAME: Flammable liquid, toxic, n.o.s. (ETHYLENE DICHLORIDE, TETRACHLOROETHYLENE)
HAZARD CLASS / DIVISION: 3
Packing Group: II
LABELING REQUIREMENTS: 3, 6.1

ADDITIONAL INFORMATION: Transport by vessel requires flashpoint on shipping papers
MARINE POLLUTANT: Trichloroethylene Carbon Tetrachloride Hexachlorobutadiene 1,2,3-Trichlorobenzene o-Dichlorobenzene p-Dichlorobenzene Polychlorinated biphenyls

15. REGULATORY INFORMATION

U.S. REGULATIONS

OSHA REGULATORY STATUS:
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):
If a release is reportable under CERCLA section 103, notify the state emergency response commission and local emergency planning committee. In addition, notify the National Response Center at (800) 424-8802 or (202) 426-2675.

Component	CERCLA Reportable Quantities:
Ethylene Dichloride	1 lb (final RQ) 100 lb (final RQ)
Tetrachloroethylene [Perc]	1 lb (final RQ) 100 lb (final RQ)
Carbon Tetrachloride	10 lb (final RQ)
Trichloroethylene	1 lb (final RQ) 100 lb (final RQ)
Hexachlorobutadiene [1,3-Butadiene, 1,1,2,3,4,4-hexachloro-]	1 lb (final RQ)
Hexachloroethane	1 lb (final RQ) 100 lb (final RQ)
1,1,2-Trichloroethane	1 lb (final RQ) 100 lb (final RQ)
Hexachlorobenzene	1 lb (final RQ) 10 lb (final RQ)
p-Dichlorobenzene	100 lb (final RQ)
o-Dichlorobenzene	100 lb (final RQ)

SARA EHS Chemical (40 CFR 355.30)
Not regulated

EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.10):

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

EPCRA SECTION 313 (40 CFR 372.65):
The following chemicals are listed in 40 CFR 372.65 and may be subject to Community Right-to Know Reporting requirements.

Component	Status:
Ethylene Dichloride	0.1 %
Tetrachloroethylene [Perc]	0.1 %
Carbon Tetrachloride	0.1 %
Trichloroethylene	0.1 %
Hexachlorobutadiene [1,3-Butadiene, 1,1,2,3,4,4-hexachloro-]	1.0 %
Hexachloroethane	0.1 %
1,1,2-Trichloroethane	1.0 %
Decachlorobiphenyl	0.1 %
Hexachlorobenzene	0.1 %
p-Dichlorobenzene	0.1 %
o-Dichlorobenzene	1.0 %

OSHA PROCESS SAFETY (PSM) (29 CFR 1910.119):
The PSM standard may apply to processes which involve a flammable liquid or gas in a quantity of 10,000 pounds (4535.9 kg) or more.

NATIONAL INVENTORY STATUS

U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA): All components are listed or exempt.

TSCA 12(b): This product is subject to a TSCA Section 4 Enforceable Consent Agreement. OxyChem and others are to report as required under Section 12(b). (Ethylene dichloride 107-06-2).

Canadian Chemical Inventory: All components of this product are listed on either the DSL or the NDSL.

STATE REGULATIONS

California Proposition 65:
This product contains a chemical known to the State of California to cause cancer, and/or birth defects, and/or other reproductive harm as listed under Proposition 65 State Drinking Water and Toxic Enforcement Act.

Component	California Proposition 65 Cancer WARNING:	California Proposition 65 CRT List - Male reproductive toxin:	California Proposition 65 CRT List - Female reproductive toxin:	Massachusetts Right to Know Hazardous Substance List	New Jersey Right to Know Hazardous Substance List	New Jersey Special Health Hazards Substance List
Ethylene Dichloride 107-06-2	Listed	Not Listed	Not Listed	Listed	0652	carcinogen; flammable - third degree; mutagen
Tetrachloroethylene [Perc] 127-18-4	Listed	Not Listed	Not Listed	Listed	1810	carcinogen
Carbon Tetrachloride 56-23-5	Listed	Not Listed	Not Listed	Listed	0347	carcinogen

CRUDE ETHYLENE DICHLORIDE

SDS No.: M34502 **SDS Revision Date:** 21-May-2015

Trichloroethylene 79-01-6	Listed developmental toxicity	Not Listed	Not Listed	Listed	1890	carcinogen; mutagen
Hexachlorobutadiene [1,3-Butadiene, 1,1,2,3,4,4-hexachloro-] 87-68-3	Listed	Not Listed	Not Listed	Listed	0979	carcinogen
Hexachloroethane 67-72-1	Listed	Not Listed	Not Listed	Listed	0981	carcinogen
Phenol, 4-(1,1-dimethylpropyl)- 80-46-6	Not Listed	Not Listed	Not Listed	Listed	Not Listed	Not Listed
1,1,2-Trichloroethane 79-00-5	Listed	Not Listed	Not Listed	Listed	1889	carcinogen
Decachlorobiphenyl 2051-24-3	Listed developmental toxicity	Not Listed	Not Listed	Listed	1554	Not Listed
Hexachlorobenzene 118-74-1	Listed developmental toxicity	Not Listed	Not Listed	Listed	0978	carcinogen
p-Dichlorobenzene 106-46-7	Listed	Not Listed	Not Listed	Listed	0643	Not Listed
o-Dichlorobenzene 95-50-1	Not Listed	Not Listed	Not Listed	Listed	0642	Not Listed
Benzene, 1,2,3-trichloro- 87-61-6	Not Listed	Not Listed	Not Listed	Listed	Not Listed	Not Listed

Component	New Jersey - Environmental Hazardous Substance List	Pennsylvania Right to Know Hazardous Substance List	Pennsylvania Right to Know Special Hazardous Substances	Pennsylvania Right to Know Environmental Hazard List	Rhode Island Right to Know Hazardous Substance List
Ethylene Dichloride 107-06-2	Listed	Listed	Present	Present	Listed
Tetrachloroethylene [Perc] 127-18-4	Listed	Listed	Present	Present	Listed
Carbon Tetrachloride 56-23-5	Listed	Listed	Listed	Listed	Listed
Trichloroethylene 79-01-6	Listed	Listed	Not Listed	Present	Listed
Hexachlorobutadiene [1,3-Butadiene, 1,1,2,3,4,4-hexachloro-] 87-68-3	Listed	Listed	Not Listed	Present	Listed
Hexachloroethane 67-72-1	Listed	Listed	Not Listed	Present	Listed
Phenol, 4-(1,1-dimethylpropyl)- 80-46-6	Not Listed	Listed	Not Listed	Not Listed	Not Listed
1,1,2-Trichloroethane 79-00-5	Listed	Listed	Not Listed	Present	Listed
Decachlorobiphenyl 2051-24-3	Listed	Listed	Present	Present	Not Listed
Hexachlorobenzene 118-74-1	Listed	Listed	Present	Present	Listed

p-Dichlorobenzene 106-46-7	Listed	Listed	Present	Present	Listed
o-Dichlorobenzene 95-50-1	Listed	Listed	Not Listed	Present	Listed
Benzene, 1,2,3-trichloro- 87-61-6	Not Listed	Listed	Not Listed	Present	Not Listed
Benzene, 1,2,3,5-tetrachloro- 634-90-2	Not Listed	Listed	Not Listed	Present	Not Listed

CANADIAN REGULATIONS

• This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations

WHMIS - Classifications of Substances:

• B2 - Flammable Liquid
• D1A - Poisonous and Infectious Material; Materials causing immediate and serious toxic effects - Very toxic material
• D2A - Poisonous and Infectious Material; Materials causing other toxic effects - Very toxic material
• D2B - Poisonous and Infectious Material; Materials causing other toxic effects - Toxic material

16. OTHER INFORMATION

Prepared by: OxyChem Corporate HESS - Health Risk Management

Rev. Date: 21-May-2015

HMIS: (SCALE 0-4) (Rated using National Paint & Coatings Association HMIS: Rating Instructions, 2nd Edition)

Health Rating: 2* **Flammability Rating:** 3 **Reactivity Rating:** 1

NFPA 704 - Hazard Identification Ratings (SCALE 0-4)

Health Rating: 2 **Flammability:** 3 **Reactivity Rating:** 1

CRUDE ETHYLENE DICHLORIDE

SDS No.: M34502 **SDS Revision Date:** 21-May-2015

Reason for Revision:
• Updated the (M)SDS header
• Changed the SDS format to meet the GHS requirements of the revised 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200}
• Updated 24 Hour Emergency Telephone Number: SEE SECTION 1
• Product Identifier has been added or updated: SEE SECTION 1
• Updated Uses Advised Against information: SEE SECTION 1
• Added OSHA Status: SEE SECTION 2
• Emergency Overview was revised: SEE SECTION 2
• Added GHS Information: SEE SECTION 2
• Added synonym(s): SEE SECTION 3
• Updated First Aid Measures: SEE SECTION 4
• Modified Fire Fighting Measure Recommendations: SEE SECTION 5
• Revised Accidental Release Measures: SEE SECTION 6
• Revised Handling and Storage Recommendations: SEE SECTION 7
• Revised Exposure Controls/Personal Protection information: SEE SECTION 8
• Updated Physical and Chemical Properties. SEE SECTION 9
• Stability and Reactivity recommendations: SEE SECTION 10
• Toxicological Information has been revised: SEE SECTION 11
• Ecological Information has been modified: SEE SECTION 12
• Updated Disposal Considerations. SEE SECTION 13
• Updated Transportation Information: SEE SECTION 14
• Regulatory Information Changes: SEE SECTION 15
• Added SDS Revision Date: SEE SECTION 16
• Added/Updated Revision Log: SEE SECTION 16

IMPORTANT:
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OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Safety Data Sheet available to your employees

End of Safety Data Sheet