

# SAFETY DATA SHEET

## 1. Identification of the hazardous chemical and of the supplier

**Product identifier:** Ethylene Dichloride

**Other means of identification**

**Product No.:** 9301

**Recommended use of the chemical and restrictions on use**

**Recommended use:** Not available.

**Recommended restrictions:** Not determined.

**Details of the supplier of the safety data sheet**

Company Name: Avantor Performance Materials, LLC  
 Address: 100 Matsonford Rd, Suite 200  
 Radnor, PA 19087  
 Telephone: Customer Service: 855-282-6867  
 Contact Person: Product Information Compliance  
 E-mail: info@avantormaterials.com

**Emergency telephone number:** CHEMTREC: 01-800-681-9531

## 2. Hazard(s) identification

**Hazard Classification**

**Physical Hazards**

Flammable liquids Category 2

**Health Hazards**

Acute toxicity (Oral) Category 4  
 Skin Corrosion/Irritation Category 2  
 Serious Eye Damage/Eye Irritation Category 2A  
 Carcinogenicity Category 1B

**Label Elements**

**Hazard Symbol:**



**Signal Word:**

Danger

<b>Hazard Statement:</b>	<p>H225: Highly flammable liquid and vapor.                  H302: Harmful if swallowed.                  H315: Causes skin irritation.                  H319: Causes serious eye irritation.                  H335: May cause respiratory irritation.                  H350: May cause cancer.</p>
<b>Precautionary Statements</b>	
<b>Prevention:</b>	<p>P201: Obtain special instructions before use.                  P202: Do not handle until all safety precautions have been read and understood.                  P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.                  P233: Keep container tightly closed.                  P240: Ground and bond container and receiving equipment.                  P241: Use explosion-proof [electrical/ventilating/lighting] equipment.                  P242: Use non-sparking tools.                  P243: Take action to prevent static discharges.                  P270: Do not eat, drink or smoke when using this product.                  P280: Wear protective gloves/protective clothing/eye protection/face protection.                  P261: Avoid breathing dust/fume/gas/mist/vapors/spray.                  P271: Use only outdoors or in a well-ventilated area.                  P264: Wash hands thoroughly after handling.</p>
<b>Response:</b>	<p>P370+P378: In case of fire: Use water spray, foam, dry powder or carbon dioxide for extinction.                  P301+P312: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.                  P330: Rinse mouth.                  P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].                  P362: Take off contaminated clothing.                  P332+P313: If skin irritation occurs: Get medical advice/attention.                  P308+P313: IF exposed or concerned: Get medical advice/attention.                  P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.                  P337+P313: If eye irritation persists: Get medical advice/attention.                  P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.                  P312: Call a POISON CENTER/doctor if you feel unwell.</p>
<b>Storage:</b>	<p>P403+P235: Store in a well-ventilated place. Keep cool.                  P405: Store locked up.                  P233: Keep container tightly closed.</p>
<b>Disposal:</b>	<p>P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.</p>

**3. Composition/information on ingredients**

**Substances**

Chemical Identity	CAS number	Content in percent (%)*
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ETHYLENE DICHLORIDE	107-06-2	90 - 100%
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\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

#### 4. First-aid measures

**General information:** Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

**Inhalation:** Move to fresh air. Get medical attention if symptoms persist.

**Skin Contact:** Wash with soap and water. If skin irritation occurs: Get medical advice/attention. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

**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:** Rinse mouth. Call a POISON CENTER/doctor if you feel unwell.

#### Most important symptoms/effects, acute and delayed

**Symptoms:** Irritating to eyes, respiratory system and skin. Narcotic effect.

**Hazards:** No data available.

#### Indication of immediate medical attention and special treatment needed

**Treatment:** Symptoms may be delayed. Treat symptomatically.

#### 5. Fire-fighting measures

**General Fire Hazards:** Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

#### Suitable (and unsuitable) extinguishing media

**Suitable extinguishing media:** Water spray, foam, dry powder or carbon dioxide.

**Unsuitable extinguishing media:** Avoid water in straight hose stream; will scatter and spread fire.

**Specific hazards arising from the chemical:** Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations. Heat may cause the containers to explode.

#### Special protective equipment and precautions for firefighters

**Special fire fighting procedures:** Flammable liquid and vapor.

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Keep upwind. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. See Section 8 of the SDS for Personal Protective Equipment.

**Methods and material for containment and cleaning up:** In case of leakage, eliminate all ignition sources. Take precautionary measures against static discharges. Stop leak if possible without any risk. Use non-sparking tools. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

**Environmental Precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

**Notification Procedures:** Prevent entry into waterways, sewer, basements or confined areas. Stop leak if you can do so without risk. Inform authorities if large amounts are involved.

**7. Handling and storage**

**Precautions for safe handling:** DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take precautionary measures against static discharges. Ground and bond container and receiving equipment. Use explosion-proof [electrical/ventilating/lighting] equipment. Use non-sparking tools. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash hands thoroughly after handling.

**Conditions for safe storage, including any incompatibilities:** Keep away from food, drink and animal feeding stuffs. Keep container tightly closed in a cool, well-ventilated place. Ground container and transfer equipment to eliminate static electric sparks. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

**8. Exposure controls/personal protection**

**Control Parameters**

**Occupational Exposure Limits**

Chemical Identity	Type	Exposure Limit Values	Source
ETHYLENE DICHLORIDE	VLE-PPT	10 ppm 40 mg/m3	Mexico. OELs. (NOM-010-STPS-2014 Chemical Pollutants at the Workplace; Assessment and Control) (03 2000)

**Appropriate Engineering Controls** No data available.

## Individual protection measures, such as personal protective equipment

<b>General information:</b>	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.
<b>Eye/face protection:</b>	Wear safety glasses with side shields (or goggles).
<b>Skin Protection</b>	
<b>Hand Protection:</b>	Chemical resistant gloves
<b>Other:</b>	Wear suitable protective clothing.
<b>Respiratory Protection:</b>	In case of inadequate ventilation use suitable respirator.
<b>Hygiene measures:</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower.

## 9. Physical and chemical properties

### Appearance

<b>Physical state:</b>	Liquid
<b>Form:</b>	Liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Chloroform-like odor
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Melting point/freezing point:</b>	-35.3 °C
<b>Initial boiling point and boiling range:</b>	83 °C
<b>Flash Point:</b>	13 °C (Closed Cup)
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	15.9 %(V)
<b>Flammability limit - lower (%):</b>	6.2 %(V)
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	11.6 kPa (25 °C)
<b>Vapor density:</b>	No data available.
<b>Density:</b>	1.24 g/ml (20 °C)
<b>Relative density:</b>	1.2351 (20 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	8.1 g/l (20 °C)
<b>Solubility (other):</b>	ethanol: very soluble very soluble
<b>Partition coefficient (n-octanol/water):</b>	1.48
<b>Auto-ignition temperature:</b>	413 °C

**Decomposition temperature:** No data available.  
**Viscosity:** No data available.

**Other information**

**Molecular weight:** 98.96 g/mol (C<sub>2</sub>H<sub>4</sub>Cl<sub>2</sub>)

**10. Stability and reactivity**

**Reactivity:** No dangerous reaction known under conditions of normal use.  
**Chemical Stability:** Material is stable under normal conditions.  
**Possibility of hazardous reactions:** Hazardous polymerization does not occur.  
**Conditions to avoid:** Heat, sparks, flames. Contact with incompatible materials.  
**Incompatible Materials:** Ammonia. Caustics. Reducing agents. Oxidizing agents. Alkali metals. Alkali earth metals. Organic peroxides/hydroperoxides. Amines.  
**Hazardous Decomposition Products:** By heating and fire, toxic vapors/gases may be formed.

**11. Toxicological information**

**Information on likely routes of exposure**

**Inhalation:** May cause irritation to the respiratory system. May cause drowsiness or dizziness.  
**Skin Contact:** Causes skin irritation.  
**Eye contact:** Causes serious eye irritation.  
**Ingestion:** Harmful if swallowed.

**Information on toxicological effects**

**Acute toxicity (list all possible routes of exposure)**

**Oral Product:** LD 50 (Rat): 670 mg/kg  
**Dermal Product:** No data available.  
**Inhalation Product:** LC 50 (Rat, 165 min): 3000 ppm  
LD 50 (Rat, 7 h): 1000 ppm  
LC 50 (Rat, 31.8 min): 12000 ppm  
LC 50 (Rat, 432 min): 1000 ppm

**Repeated dose toxicity**

**Product:** No data available.

**Skin Corrosion/Irritation**

**Product:** Causes skin irritation.

**Serious Eye Damage/Eye Irritation**

**Product:** Causes serious eye irritation.

**Respiratory or Skin Sensitization**

**Product:** Not a skin sensitizer.

**Carcinogenicity**

**Product:** May cause cancer.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

ETHYLENE  
DICHLORIDE Overall evaluation: 2B. Possibly carcinogenic to humans.

**Germ Cell Mutagenicity**

**In vitro**

**Product:** No mutagenic components identified

**In vivo**

**Product:** No mutagenic components identified

**Reproductive toxicity**

**Product:** No data available.

**Specific Target Organ Toxicity - Single Exposure**

**Product:** Inhalation - vapor: Respiratory system - Respiratory tract irritation.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** No data available.

**Aspiration Hazard**

**Product:** Not classified

**Other effects:** None known.

**12. Ecological information**

**Ecotoxicity:**

**Acute hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Specified substance(s):**

ETHYLENE LC 50 (Sheepshead minnow (Cyprinodon variegatus), 96 h): > 130 - < 230  
DICHLORIDE mg/l Mortality  
LC 50 (Fathead minnow (Pimephales promelas), 96 h): 110 - 123 mg/l

Mortality  
LC 50 (Rainbow trout, donaldson trout (*Oncorhynchus mykiss*), 96 h): 225 mg/l Mortality  
LC 50 (Bluegill (*Lepomis macrochirus*), 96 h): 230 - 710 mg/l Mortality

**Aquatic Invertebrates**

**Product:** No data available.

**Specified substance(s):**

ETHYLENE LC 50 (Scud (*Gammarus fasciatus*), 96 h): > 100 mg/l Mortality  
DICHLORIDE LC 50 (Scud (*Gammarus fasciatus*), 24 h): > 100 mg/l Mortality  
EC 50 (Water flea (*Daphnia magna*), 48 h): 140 - 190 mg/l Intoxication  
LC 50 (Water flea (*Daphnia magna*), 48 h): 160 - 280 mg/l Mortality

**Chronic hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Aquatic Invertebrates**

**Product:** No data available.

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Persistence and Degradability**

**Biodegradation**

**Product:** There are no data on the degradability of this product.

**BOD/COD Ratio**

**Product:** No data available.

**Bioaccumulative potential**

**Bioconcentration Factor (BCF)**

**Product:** No data available on bioaccumulation.

**Partition Coefficient n-octanol / water (log Kow)**

**Product:** Log Kow: 1.48

**Mobility in soil:** No data available.

**Other adverse effects:** The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**13. Disposal considerations**

**Disposal instructions:** Discharge, treatment, or disposal may be subject to national, state, or local laws.

**Contaminated Packaging:** Since emptied containers retain product residue, follow label warnings even after container is emptied.



**14. Transport information**

**SCT**

UN Number: UN 1184  
 UN Proper Shipping Name: ETHYLENE DICHLORIDE  
 Transport Hazard Class(es)  
     Class: 3  
     Label(s): 3, 6.1  
 Packing Group: II  
 Environmental Hazards: No  
 Special precautions for user: Not regulated.

**IATA**

UN Number: UN 1184  
 Proper Shipping Name: Ethylene dichloride  
 Transport Hazard Class(es):  
     Class: 3  
     Label(s): 3, 6.1  
 Packing Group: II  
 Environmental Hazards: No  
 Special precautions for user: Not regulated.

**IMDG**

UN Number: UN 1184  
 UN Proper Shipping Name: ETHYLENE DICHLORIDE  
 Transport Hazard Class(es)  
     Class: 3  
     Label(s): 3, 6.1  
     EmS No.: F-E, S-D  
 Packing Group: II  
 Environmental Hazards: No  
 Special precautions for user: Not regulated.

**Transport in bulk according to Annex II of MARPOL and the IBC Code:** Not applicable

**15. Regulatory information**

**Safety, health and environmental regulations specific for the product in question**

**Mexico. Substances subject to reporting for the pollutant release and transfer registry (PRTR)**

Chemical Identity	Yearly reporting threshold (Manufacture, Processing or Use):	Yearly reporting threshold (Emissions):
ETHYLENE DICHLORIDE	5000 kg.	1000 kg.

**Mexico. Federal Law for the Control of Chemical Substances Susceptible to Diversion to Manufacturing of Chemical Weapons, Appendix 1: National list of chemical substances**

Not applicable

**Mexico. Wastewater Discharges - Maximum Limits into Coastal Waters, Dams, Rivers, Soil and Wetlands (NOM-001-ECOL)**

none

**Mexico. Hazardous Chemicals (NOM-028-STPS-2012, System for administration of workplace safety in the process and critical equipment for handling hazardous chemicals, Appendix A, Table A.I)**

**Mexico. Narcotic Drugs List (General Health Law, Articles 234 & 239, Feb. 7, 1984)**

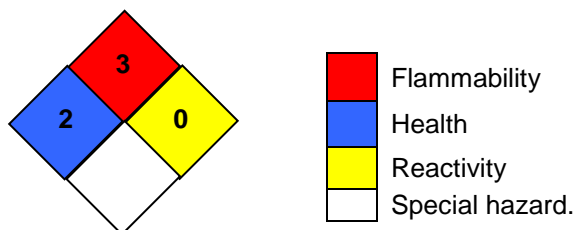
**Mexico. Psychotropic Drugs (General Health Law, Feb. 7, 1984, Articles 245 & 254 Bis)**

**Inventory Status:**

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

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

**NFPA Hazard ID**



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

<b>Issue Date:</b>	06-17-2019
<b>Revision Information:</b>	No data available.
<b>Version #:</b>	1.2
<b>Further Information:</b>	No data available.

**Disclaimer:**

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