

## MATERIAL SAFETY DATA SHEET

Version :02

PRODUCT NAME: ETHYLENE DICHLORIDE (1,2-DICHLOROETHANE)

CAS Number: 107-06-2

**1. IDENTIFICATION:**

**Product Code** : 90597, 91566, 91668, 94042, 90072, 98191

**Company Name** : ADVENT CHEMBIO PRIVATE LIMITED

**Address** : W-279, MIDC, TTC INDUSTRIAL AREA, THANE-BELAPUR ROAD, RABALE,  
NAVI MUMBAI - 400 701, MAHARASHTRA, INDIA.

**E-mail** : [sales@adventchembio.com](mailto:sales@adventchembio.com)

**WEBSITE** : [www.adventchembio.com](http://www.adventchembio.com)

**Company Phone Number** : +91 77770 84837

**2. HAZARDS IDENTIFICATION:****Hazard classification****Physical hazards**

**Flammable liquids** : Category 2

**Health hazards**

**Acute toxicity, Oral** : Category 4

**Acute toxicity, Inhaled** : Category 3

**Skin irritation** : Category 2

**Eye irritation** : Category 2

**Carcinogenicity** : Category 1B

**Specific target organ  
toxicity - single exposure,  
Respiratory system** : Category 3

**Aspiration hazard** : Category 1

**Labels elements** :

**Hazard symbol** : 

**Signal word** : Danger

**Hazard statement** : Highly flammable liquid and vapor.  
Harmful if swallowed.  
May be fatal if swallowed and enters airways.  
Causes skin irritation.  
Causes serious eye irritation.  
Toxic if inhaled.  
May cause respiratory irritation.  
May cause cancer.

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**Precautionary statement**

- Prevention** : Obtain special instructions before use.  
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Do not handle until all safety precautions have been read and understood.  
Wear protective gloves/ protective clothing/ eye protection/ face protection.  
Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.  
Keep container tightly closed. Ground/ bond container and receiving equipment.  
Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
Use only non-sparking tools. Take precautionary measures against static discharge.
- Response** : IF exposed or concerned: Get medical advice/ attention.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
IF SWALLOWED: Immediately call a poison center or doctor/physician.
- Storage** : Store in a dry & well-ventilated place. Keep container tightly closed. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
- Disposal** : Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
- Other hazards which do not result in GHS classification** : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.  
**Ecological information:** The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.  
**Toxicological information:** The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**3. COMPOSITION/ INFORMATION ON INGREDIENTS:**

Ingredient	CAS Number	Percent	Hazardous
Ethylene Dichloride (1,2-Dichloroethane)	107-06-2	NLT 99.0%	Yes

**4. FIRST AID MEASURES:**

- General information** : Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
- Ingestion** : Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen.
- Inhalation** : Get medical attention if symptoms persist.

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<b>Skin contact</b>	:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
<b>Eye contact</b>	:	Immediately flush with plenty of water for at least 15 minutes. Call in ophthalmologist. If easy to do, remove contact lenses. Get medical attention.
<b>Most important symptoms/effects, acute and delayed</b>	:	The most important known symptoms and effects are described in the labelling.
<b>Indication of immediate medical attention and special treatment needed</b>	:	No data available.

**5. FIRE FIGHTING MEASURES:****General information** : Flammable liquid and vapor.**Suitable (and unsuitable) extinguishing media****Suitable extinguishing media** : Water spray, foam, dry powder or carbon dioxide.**Unsuitable extinguishing media** : For this substance/mixture no limitations of extinguishing agents are given.**Specific hazards arising from the chemical** : Carbon oxides, Hydrogen chloride gas, Combustible.  
Fire may cause evolution of: Hydrogen chloride gas Pay attention to flashback. Vapors are heavier than air and may spread along floors. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.**Special protective equipment and precautions for firefighters****Special firefighting procedures** : Fight fire from a protected location. Move containers from fire area if you can do so without risk.**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).  
Avoid breathing mists or vapors. Keep upwind. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.**Methods and material for containment and cleaning up** : Eliminate all ignition sources if safe to do so. Use only non-sparking tools. Take precautionary measures against static discharges. Stop leak if possible without any risk.  
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.**Notification Procedures** : Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.**Environmental precautions** : Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

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**7. HANDLING AND STORAGE:**

<b>Precautions for safe handling</b>	Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Wear protective gloves/protective clothing/eye protection/ face protection. Avoid contact with eyes, skin, and clothing. Do not breathe mist or vapor. Use only with adequate ventilation. Wash hands thoroughly after handling.
<b>Conditions for safe storage, including any incompatibilities</b>	Keep away from food, drink and animal feeding stuffs. Keep container tightly closed in a dry, well-ventilated place. Ground container and transfer equipment to eliminate static electric sparks.

**8. EXPOSURE CONTROLS PERSONAL PROTECTION:**

<b>Appropriate engineering controls</b>	: No data available
<b>Individual protection measures, such as personal protective equipment</b>	
<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>Hand protection</b>	: Chemical resistant gloves.
<b>Other</b>	: Wear suitable protective clothing.
<b>Respiratory protection</b>	: Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds.
<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. Avoid contact with eyes, skin, and clothing.

**9. PHYSICAL AND CHEMICAL PROPERTIES:**

<b>Appearance</b>	: Clear, colorless liquid
<b>Odor</b>	: No data available.
<b>Solubility</b>	: Miscible in water.
<b>Formula</b>	: ClCH <sub>2</sub> CH <sub>2</sub> Cl
<b>Molecular Weight</b>	: 98.96 g/mol

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<b>Density</b>	:	1.252 - 1.254 g/cm <sup>3</sup> at 25°C
<b>pH</b>	:	No data available.
<b>% Volatiles by volume @ 21C (70F)</b>	:	No data available.
<b>Boiling Point</b>	:	82 - 84°C
<b>Melting Point</b>	:	-35.5°C
<b>Flash Point</b>	:	13 °C
<b>Relative vapor density</b>	:	4.1 @ 20°C
<b>Vapor Pressure (mm Hg)</b>	:	102 @ 25°C
<b>Evaporation Rate (BuAc=1)</b>	:	No data available.

**10. STABILITY AND REACTIVITY:**

<b>Reactivity</b>	:	Vapors may form explosive mixture with air.
<b>Chemical stability</b>	:	Material is stable under ambient conditions..
<b>Possibility of hazardous reactions</b>	:	<b>Exothermic reaction with:</b> Alkaline earth metals, alkali amides, Nitric acid, nitrogen oxides, Oxidizing agents, Chlorine, powdered magnesium, Zinc <b>Risk of explosion with:</b> Alkali metals, powdered aluminium, Powdered metals, Potassium, nitrogen dioxide
<b>Conditions to avoid</b>	:	Warming
<b>Incompatible materials</b>	:	No data available.
<b>Hazardous decomposition products</b>	:	In the event of fire: see section 5

**11. TOXICOLOGICAL INFORMATION:****Information on toxicological effects****Acute toxicity (list all possible routes of exposure)**

<b>Oral Product</b>	:	LD 50 (Rat): 770 mg/kg
<b>Dermal Product</b>	:	LD 50 (Rabbit): 4.890mg/kg
<b>Inhalation Product</b>	:	LC 50 (Rat): 7.8 mg/l
<b>Repeated dose toxicity Product</b>	:	No data available.
<b>Skin corrosion/irritation Product</b>	:	irritating
<b>Serious eye damage/eye irritation Product</b>	:	Eye irritation
<b>Respiratory or skin sensitization Product</b>	:	Local lymph node assay (LLNA) - Mouse Result: negative



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<b>Carcinogenicity Product</b>	:	Presumed to have carcinogenic potential for humans
<b>IARC Monographs on the Evaluation of Carcinogenic Risks to Humans</b>	:	No data available.
<b>US. National Toxicology Program (NTP) Report on Carcinogens</b>	:	No data available.
<b>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	:	No data available.
<b>Germ cell mutagenicity</b>		Test Type: Ames test Test system: S. typhimurium Metabolic activation: with and without metabolic activation Result: positive Test Type: Ames test Test system: Escherichia coli Metabolic activation: without metabolic activation Result: positive Test Type: In vitro mammalian cell gene mutation test Test system: human lymphoblastoid cells Metabolic activation: without metabolic activation Result: positive Test Type: In vitro mammalian cell gene mutation test Test system: human lymphoblastoid cells Metabolic activation: without metabolic activation Result: positive : Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: Chinese hamster lung cells Metabolic activation: with and without metabolic activation Result: positive Test Type: unscheduled DNA synthesis assay Test system: rat hepatocytes Metabolic activation: without metabolic activation Result: positive Test Type: Micronucleus test Species: Mouse Application Route: Intraperitoneal Test Guideline 474 Result: negative Test Type: Mutagenicity (mammal cell test): micronucleus. Species: Mouse Cell type: Red blood cells (erythrocytes) Application Route: Oral

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Result: negative  
Test Type: sister chromatid exchange assay  
Species: Rat  
Cell type: mammary gland  
Application Route: inhalation (vapor)  
Result: negative  
Species: Drosophila melanogaster  
Cell type: sperm  
Application Route: Inhalation  
Result: positive  
Test Type: Transgenic rodent somatic cell gene mutation assay Species: Mouse Application  
Route: Intraperitoneal  
Result: negative

**Reproductive toxicity Product** : No data available.  
**Specific target organ toxicity - single exposure Product** : May cause respiratory irritation.  
**Specific target organ toxicity - repeated exposure Product** : No data available.  
**Aspiration hazard Product** : Aspiration may cause pulmonary edema and pneumonitis.  
**Other effects** : No data available.

**12. ECOLOGICAL INFORMATION:****Ecotoxicity****Acute hazards to the aquatic environment**

**Fish Product** : Flow-through test LC50 - Pimephales promelas (fathead minnow) - 136 mg/l - 96 h  
**Toxicity to daphnia and other aquatic invertebrates** : Static test EC50 - Daphnia magna (Water flea) - 160 mg/l - 48 h  
**Toxicity to algae** : Static test EC50 - Desmodesmus subspicatus (green algae) - 166 mg/l - 72 h  
**Toxicity to bacteria** : Static test EC50 - activated sludge - 35.500 mg/l - 3 h

**Chronic hazards to the aquatic environment**

**Toxicity to daphnia and other aquatic invertebrates** : Static test NOEC - Daphnia magna (Water flea) - 11 mg/l - 28 d  
**Persistence and degradability**

**Biodegradation Product** : 90 % - Inherently biodegradable.

**BOD/COD ratio Product** : No data available.

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**Bioaccumulative potential**

<b>Bioconcentration factor (BCF) Product</b>	:	Lepomis macrochirus - 14 d at 16 °C - 0,957 mg/l(1,2-Dichloroethane) Bioconcentration factor (BCF): 2
<b>Partition coefficient n-octanol / water (log Kow) Product</b>	:	No data available.
<b>Mobility in soil</b>	:	No data available.
<b>Other adverse effects</b>	:	No data available.

**13. DISPOSAL CONSIDERATION:**

<b>Disposal instructions</b>	:	Discharge, treatment, or disposal may be subject to national, state, or local laws. Disposal recommendations are based on uncontaminated material.
<b>Contaminated packaging</b>	:	Since emptied containers retain product residue, follow label warnings even after container is emptied.

**14. TRANSPORT INFORMATION:**

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
<b>ADR/RID</b>	UN 1184	Ethylene Dichloride (1,2-Dichloroethane)	3 (6.1)	II	No
<b>IMDG</b>	UN 1184	Ethylene Dichloride (1,2-Dichloroethane)	3 (6.1)	II	No
<b>IATA</b>	UN 1184	Ethylene Dichloride (1,2-Dichloroethane)	3 (6.1)	II	No

**15. REGULATORY INFORMATION:**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.  
Safety, health and environmental regulations/legislation specific for the substance or mixture  
No Data Available.

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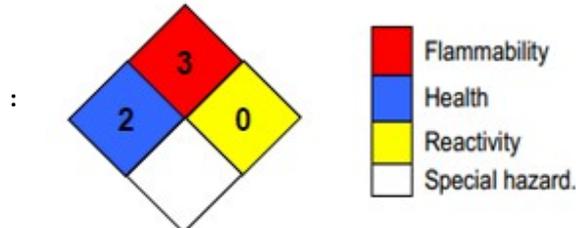
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## 16. OTHER INFORMATION:

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

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