



SAFETY DATA SHEET

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SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **1,2-Dichloroethane**
PRODUCT NUMBER: 12280
CAS NUMBER: 107-06-2
SYNONYMS: Ethylene Dichloride; Ethylene Chloride

MANUFACTURER:

Prochem, Inc.
826 Roosevelt Road
Rockford, IL 61109

PHONE: 815-398-1788
FAX: 815-398-1810
TOLL FREE: 800-795-8788

IN CASE OF TRANSPORTATION EMERGENCY CONTACT CHEM-TREC: 1-800-424-9300

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION OF SUBSTANCE OR MIXTURE

Pictogram



Signal Word

Danger

Hazard Statements

H225	Highly flammable liquid and vapor.
H302	Harmful if swallowed.
H313	May be harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H350	May cause cancer.

Precautionary Phrases

P201	Obtain special instructions before use.
P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P261	Avoid breathing dust/fumes/gas/mist/vapours/spray.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
P311	Call a POISON CENTER or doctor/physician.

HMIS CLASSIFICATION:

Health: 2 Fire: 3 Reactivity Hazard: 0 Personal: H

NFPA RATING:

Health: 2 Flammability: 3 Reactivity Hazard: 0

SECTION 2 HAZARDS IDENTIFICATION (Cont.)

EYE CONTACT: Causes eye irritation

SKIN CONTACT: Harmful if absorbed through the skin. Causes skin irritation

INHALATION: May be harmful if inhaled. Causes respiratory tract irritation.

INGESTION: Harmful if swallowed

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula: C₂H₄Cl₂

Molecular Weight: 98.96

CHEMICAL NAME	CAS#	%
Ethylene Dichloride	107-06-2	100

SECTION 4 FIRST AID MEASURES

EYE EXPOSURE: In case of eye contact, rinse with plenty of water and seek medical attention if necessary.

SKIN EXPOSURE: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention if necessary.

INHALATION: Remove to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if necessary.

INGESTION: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention if necessary.

SECTION 5 FIREFIGHTING MEASURES

FLASH POINT: 13°C Closed Cup – tested according to Annex V of directive 67/548/EEC

AUTO IGNITION TEMPERATURE: 413°C at 1,013 hPa

EXPLOSION LIMITS: Lower: 6.2% Upper: 16.2%

EXTINGUISHING MEDIUM: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: Flammable in the presence of a source of ignition or temperatures above flash point. Carbon oxides and hydrogen chloride gas. Vapors may form explosive mixture in air.

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Wear all appropriate equipment when using this material. Ensure adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols. Remove all sources of ignition. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

ENVIRONMENTAL PRECAUTIONS: Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Neutralize spill with sodium bicarbonate or lime. Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

SECTION 7 HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Wear personal protective equipment. Ensure adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of dusts and aerosols. Use explosion-proof equipment. Keep away from sources of ignition – No smoking. Take measures to prevent the buildup of electrostatic charge.

CONDITIONS FOR SAFE STORAGE: Store in cool, dry, and well-ventilated area. Keep away from incompatible materials.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE CONTROLS:

Component	Exposure Limits	Basis	Entity	
Ethylene Dichloride	10 ppm	40 mg/m ³	TLV	ACGIH
	100 ppm	200* ppm	CEIL	OSHA
	50 mg/m ³		PEL	OSHA
	1 ppm	4 mg/m ³	REL	NIOSH
	2 ppm	8 mg/m ³	STEL	NIOSH

STEL: Short Term Exposure Limit during x minutes.

REL: Recommended Exposure Limit

CEIL: Ceiling

TLV: Threshold Limit Value over 8 hours of work.

PEL: Permissible Exposure Limit

*: 5-minute peak in any 3 hours

EYE PROTECTION: Wear chemical safety glasses or goggles.

SKIN PROTECTION: Wear nitrile or rubber gloves, apron, or lab coat.

VENTILATION: Provide local exhaust, preferably mechanical.

RESPIRATOR: Use an approved respirator

ADDITIONAL PROTECTION: Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

COLOR AND FORM: Clear, colorless liquid

ODOR: Chloroform odor

ODOR THRESHOLD: 26 ppm

MOLECULAR WEIGHT: 98.96

BOILING POINT: 83°C

MELTING POINT: -35°C

SPECIFIC GRAVITY: 1.256 gm/ml

SOLUBILITY: Soluble

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Vapors may form explosive mixture in air

CONDITIONS TO AVOID: Heat, flames, sparks, extremes of temperature, and direct sunlight

INCOMPATIBILITY: Strong oxidizing agents, metal powders, organic peroxides, nitric acid, ammonia, reducing agents, and caustics.

DECOMPOSITION PRODUCTS: Carbon oxides and hydrogen chloride gas.

SECTION 11 TOXICOLOGICAL DATA

ACUTE TOXICITY: LD50 Dermal – rabbit – 2,800 mg/kg. Eyes – rabbit – Moderate eye irritation. LD50 Inhalation – rat – 7 hours - 1,000 ppm. LD50 Oral – rat – 670.0 mg/kg.

CARCINOGENIC EFFECTS: According to OSHA, No components of this product present at levels greater than or equal to 0.1% is identified a carcinogen. The IARC states it is possibly carcinogenic to humans. ACGIH states that it is not classifiable as a human carcinogen. NTP states that it is reasonably anticipated to be a human carcinogen.

MUTAGENIC EFFECTS: Genotoxicity in vitro – Ames test – S. Typhimurium - positive

TETRATOGENIC EFFECTS: Not available

CHRONIC TOXICITY: Reproductive toxicity – rat – Inhalation. Effects on fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants)

RTECS: KI0525000

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

SECTION 12 ECOLOGICAL DATA

AQUATIC VERTEBRATE: LC50 – Oncorhynchus mykiss (rainbow trout) – 225.00 mg/l – 96 hours. NOEC – Cyprinodon variegatus (sheepshead minnow) – 130 mg/l – 96 hours.

AQUATIC INVERTEBRATE: EC50 – Daphnia magna (water flea) – 540.00 mg/l – 24 hours. Immobilization EC50 – Daphnia magna (water flea) – 160 mg/l – 48 hours

TERRESTRIAL: Not available

This product is not readily biodegradeable (<20%).

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations.

SECTION 14 TRANSPORTATION DATA

UN1184

Ethylene dichloride

Class 3 (6.1)

PG II

Marine Pollutant: No

SECTION 15 REGULATORY INFORMATION

TSCA: Listed in the TSCA inventory

DSCL (EEC): Listed on the DSCL inventory

SARA 302/304: Not Listed

SARA 311/312: Ethylene Dichloride

SARA (TITLE 313): Not Listed

CALIFORNIA PROP. 65: Not Listed

WHMIS CANADA: Class B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). Class D-1A: Very toxic material causing immediate and serious toxic effects. Class D-2A: Very toxic material causing other toxic effects. Class E: Corrosive liquid.

SECTION 16 OTHER INFORMATION

DISCLAIMER: The information herein is believed to be accurate and reliable as of the date compiled. However, Prochem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

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