

1,2-Dichloroethane

SECTION 1. IDENTIFICATION

Product Identifier	1,2-Dichloroethane
Other Means of Identification	Dichloroethane, Ethylene dichloride
Product Code(s)	DI2510, DI2520
Product Family	Organic solution
Recommended Use	Laboratory and industrial use.
Restrictions on Use	None known.
Supplier Identifier	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
Emergency Phone No.	CANUTEC CANADA, 613-996-6666, 24 Hours
SDS No.	0548

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

Flammable liquid - Category 2; Acute toxicity (Oral) - Category 4; Acute toxicity (Dermal) - Category 5; Acute toxicity (Inhalation) - Category 3; Skin irritation - Category 3; Eye irritation - Category 2B; Carcinogenicity - Category 1B; Specific target organ toxicity (repeated exposure) - Category 2

Label Elements



Signal Word:
Danger

Hazard Statement(s):

Highly flammable liquid and vapour.
Harmful if swallowed.
Causes skin irritation.
Causes serious eye damage.
Toxic if inhaled.
May cause drowsiness or dizziness.
Causes damage to organs through prolonged or repeated exposure.
May cause cancer.

Precautionary Statement(s):

Obtain special instructions before use.

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Do not handle until all safety precautions have been read and understood.
Use only outdoors or in a well-ventilated area.
Wash hands and skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
Do not breathe dust/fume/gas/mist/vapours/spray.
Keep away from heat, sparks, open flames, and hot surfaces. – No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical, ventilating, and lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.

Response:

If exposed or concerned: Call a POISON CENTRE or doctor.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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 INHALED: Remove person to fresh air and keep comfortable for breathing.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.

Storage:

Store in a well-ventilated place. Keep container tightly closed.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Ethylene Dichloride	107-06-2	> 99	Dichloroethane	

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. Avoid mouth-to-mouth contact by using a barrier device. Call a Poison Centre or doctor.

Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. If skin irritation occurs, get medical advice or attention.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

Ingestion

Do not induce vomiting. Immediately call a Poison Centre or doctor.

First-aid Comments

Some of the first-aid procedures recommended here require advanced first-aid training. If exposed or concerned, get medical advice or attention.

Most Important Symptoms and Effects, Acute and Delayed

If inhaled: can harm the nervous system. Symptoms may include headache, nausea, dizziness, drowsiness and

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confusion.

Immediate Medical Attention and Special Treatment

Special Instructions

General advice, consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog. Special "alcohol resistant fire-fighting foams".

Unsuitable Extinguishing Media

Do not use a solid (straight) water stream as it may scatter and spread fire.

Specific Hazards Arising from the Product

May accumulate in hazardous amounts in low-lying areas especially inside confined spaces, resulting in a fire and/or health hazard. Flammable liquid and vapour. Can ignite at room temperature. Releases vapour that can form explosive mixture with air. Closed containers may rupture violently when heated releasing contents. Forms corrosive chemicals on contact with water. Forms toxic chemicals on contact with water.

In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide; corrosive hydrogen chloride; corrosive phosgene.

Special Protective Equipment and Precautions for Fire-fighters

Use extreme caution. Fight fire from a protected, explosion-resistant location or maximum distance possible. Approach fire from upwind to avoid hazardous vapours or gases. Stop leak before attempting to put out the fire. Product could form an explosive mixture and reignite. Use water spray to flush spills away from ignition sources. Knock down vapours or gases with water fog or fine water spray. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles. Dike and recover contaminated water for appropriate disposal. Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours, flammable or explosive atmosphere.

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Emergency responders: evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Evacuate downwind locations. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Eliminate all ignition sources if safe to do so. Remove or isolate incompatible materials as well as other hazardous materials. May accumulate in hazardous amounts in low-lying areas especially inside confined spaces, if ventilation is not sufficient.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Do not get in eyes, on skin or on clothing. Do not breathe in this product. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent accidental contact with incompatible chemicals. Avoid ignition sources. Electrically bond and ground equipment. Ground clips must contact bare metal. Use non-sparking tools. Keep containers tightly closed when not in use or empty.

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Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated, out of direct sunlight and away from heat and ignition sources, separate from incompatible materials (see Section 10: Stability and Reactivity).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Ethylene Dichloride	10 ppm A4		1 ppm			

A4 = Not classifiable as a human carcinogen.

Appropriate Engineering Controls

Do not allow product to accumulate in the air in work or storage areas, or in confined spaces. Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored. Control static electricity discharges which includes bonding of equipment to ground. Provide eyewash and safety shower if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Suitable materials are: Viton®, Viton®/butyl rubber, Barrier® (PE/PA/PE), Silver Shield®, Tychem® BR/LV, Tychem® Responder, Tychem® TK.

The following materials should NOT be used: butyl rubber, natural rubber, neoprene rubber, nitrile rubber, polyvinyl chloride, Tychem® SL (Saranex™).

Respiratory Protection

Wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Colourless liquid.
Odour	Aromatic
Odour Threshold	6.4 ppm (detection)
pH	Not applicable
Melting Point/Freezing Point	-35.5 °C (-31.9 °F) (melting); -35.5 °C (-31.9 °F) (freezing)
Initial Boiling Point/Range	83.5 °C (182.3 °F)
Flash Point	13 °C (55 °F)
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable
Upper/Lower Flammability or Explosive Limit	16% (upper); 6.2% (lower)
Vapour Pressure	10.5 kPa (78.8 mm Hg)
Vapour Density (air = 1)	3.4 (calculated)
Relative Density (water = 1)	1.257 at 20 °C
Solubility	0.9 g/100 mL (Slightly soluble) in water; Highly soluble in alcohols (e.g. ethanol).
Partition Coefficient, n-Octanol/Water (Log Kow)	1.48
Auto-ignition Temperature	413 °C (775 °F)

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Decomposition Temperature ~ 350 °C (662 °F)
Viscosity 0.62 mm²/s at 25 °C (kinematic); Not available (dynamic)
Other Information
Physical State Liquid

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

Decomposes in the presence of air, light, heat.

Conditions to Avoid

Exposure to air. Prolonged contact with water, moisture or humidity. Open flames, sparks, static discharge, heat and other ignition sources. Temperatures above 350.0 °C (662.0 °F)

Incompatible Materials

Strong oxidizing agents (e.g. perchloric acid), strong bases (e.g. sodium hydroxide).

Hazardous Decomposition Products

Very toxic carbon monoxide, carbon dioxide; corrosive hydrogen chloride; corrosive phosgene.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Ethylene Dichloride	1980 ppm (rat) (4-hour exposure)	770 mg/kg (rat)	4889 mg/kg (rabbit)

Skin Corrosion/Irritation

Animal tests show mild irritation.

Serious Eye Damage/Irritation

Animal tests show very mild irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May cause nose and throat irritation, depression of the central nervous system. Symptoms may include headache, nausea, dizziness, drowsiness and confusion.

Ingestion

Harmful.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

May cause harmful effects on the kidneys. Blood tests may show abnormal results.

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

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Chemical Name	IARC	ACGIH®	NTP	OSHA
Ethylene Dichloride	Group 2B	A4	Reasonably anticipated	

Group 2B – Possibly carcinogenic to humans.

A4 – Not classifiable as a human carcinogen.

Reproductive Toxicity

Development of Offspring

No information was located.

Sexual Function and Fertility

No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
IMO (Marine)	UN1184	Ethylene Dichloride	3 (6.1)	II
IATA (Air)	UN1184	Ethylene Dichloride	3 (6.1)	II
US DOT	UN1184	Ethylene Dichloride	3 (6.1)	II
Canadian TDG	UN1184	Ethylene Dichloride	3 (6.1)	II

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

Listed on the TSCA Inventory.

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SECTION 16. OTHER INFORMATION

NFPA Rating**Flammability - 3****Instability - 0****SDS Prepared By**

Alphachem Limited

Phone No.

(905)-821-2995

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References

CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

Disclaimer

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