

## Dichloroethane, (1, 2-), ACS

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Dichloroethane, (1, 2-), ACS

**Synonyms/Generic Names:** Ethylene Dichloride; Ethylene Chloride

**Product Number:** 1840

**Product Use:** Industrial, Manufacturing or Laboratory use

**Manufacturer:** Columbus Chemical Industries, Inc.  
N4335 Temkin Rd.  
Columbus, WI. 53925

**For More Information:** 920-623-2140 (Monday-Friday 8:00-4:30)  
[www.columbuschemical.com](http://www.columbuschemical.com)

**In Case of Emergency Call:** CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

### 2. HAZARDS IDENTIFICATION

**Hazard Not Otherwise Classified (HNOC):** None

**Target Organ(s):** Heart, Central nervous system, Liver, Kidney, Pancreas

**Signal Words:** Danger

**Pictograms:**



**GHS Classification:**

Flammable liquids	Category 2
Acute toxicity, Oral	Category 4
Acute toxicity, Inhalation	Category 3
Skin irritation	Category 2
Eye irritation	Category 2A
Carcinogenicity	Category 1B
Specific target organ toxicity – single exposure	Category 3

**GHS Label Elements, including precautionary statements:**

**Hazard Statements:**

H225	Highly flammable liquid and vapor.
H302	Harmful if swallowed.

H315+H320	Causes skin and eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H350	May cause cancer.

**Precautionary Statements:**

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/Bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P311	Call a POISON CENTER/doctor/physician.
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use appropriate media to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

**Potential Health Effects**

<b>Eyes</b>	Causes eye irritation.
<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Skin</b>	Harmful if absorbed through skin. Causes skin irritation.
<b>Ingestion</b>	Harmful if swallowed.

**NFPA Ratings**

<b>Health</b>	2
<b>Flammability</b>	3
<b>Reactivity</b>	0
<b>Specific hazard</b>	Not Available

**HMIS Ratings**

<b>Health</b>	3
<b>Fire</b>	3
<b>Reactivity</b>	0

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Ethylene Dichloride	>99	107-06-2	203-458-1	C <sub>2</sub> H <sub>4</sub> Cl <sub>2</sub>	98.96 g/mol

## 4. FIRST-AID MEASURES

<b>Eyes</b>	Rinse with plenty of water for at least 15 minutes and seek medical attention immediately.
<b>Inhalation</b>	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
<b>Skin</b>	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.
<b>Ingestion</b>	<b>Do Not Induce Vomiting!</b> Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

## 5. FIRE-FIGHTING MEASURES

<b>Suitable (and unsuitable) extinguishing media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Use appropriate media on adjacent fires. Cool unopened containers with water.
<b>Special protective equipment and precautions for firefighters</b>	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
<b>Specific hazards arising from the chemical</b>	Flammable in the presence of a source of ignition when the temperature is above the flash point. No smoking. Vapors may form explosive mixture in air. Emits toxic fumes (carbon oxides, hydrogen chloride gas) under fire conditions. (See also Stability and Reactivity section).

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions, protective equipment and emergency procedures</b>	See section 8 for recommendations on the use of personal protective equipment. Remove all sources of ignition. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
<b>Environmental precautions</b>	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
<b>Methods and materials for containment and cleaning up</b>	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.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with 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, including any incompatibilities

Store in a cool, dry, well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Occupational exposure controls:** Ventilation and appropriate grounding of containers.

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

\*5-minute peak in any 3 hours

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

### Personal Protection

<b>Eyes</b>	Wear chemical safety glasses or goggles with a face shield.
<b>Inhalation</b>	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
<b>Skin</b>	Wear nitrile or rubber gloves, complete suit protecting against chemicals. Flame retardant antistatic protective clothing.
<b>Other</b>	Not Available

### Other Recommendations

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Clear, colorless liquid
Odor	Chloroform odor
Odor threshold	26 ppm
pH	Not Available
Melting point/freezing point	-35°C (-31°F) – lit.
Initial boiling point and boiling range	83°C (181°F) – lit.
Flash point	13.0°C (55.4°F) – closed cup – Tested according to Annex V of Directive 67/548/EEC
Evaporation rate	6.5
Flammability (solid, gas)	Class 1A Flammable liquid.
Upper/lower flammability or explosive limit	LEL: 6.2%; UEL: 16.2%
Vapor pressure	33.3 hPa (25.0 mmHg) at 0°C (32°F) 86 hPa (65 mmHg) at 20°C (68°F) 312 hPa (234 mmHg) at 50°C (122°F)
Vapor density	3.4 (air=1)
Density	1.256 g/mL at 25°C (77°F) – lit.
Solubility (ies)	8.69 g/l at 20°C (68°F)

	10.3 g/l at 56°C (133°F)
Partition coefficient: n-octanol/water	log Pow: 1.48 at 20°C (68°F)
Auto-ignition temperature	413°C (775°F) at 1,013 hPa (760 mmHg)
Decomposition temperature	Not Available

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable
<b>Possibility of Hazardous Reactions</b>	Vapors may form explosive mixture in air.
<b>Conditions to Avoid</b>	Heat, flames, sparks, extremes of temperature, direct sunlight.
<b>Incompatible Materials</b>	Strong oxidizing agents, metal powders, organic peroxides, nitric acid, ammonia, reducing agents, caustics.
<b>Hazardous Decomposition Products</b>	Carbon oxides, hydrogen chloride gas.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

<b>Skin</b>	LD50 Dermal – rabbit – 2,800 mg/kg
<b>Eyes</b>	Eyes – rabbit – Moderate eye irritation.
<b>Respiratory</b>	LD50 Inhalation – rat – 7 hours - 1,000 ppm
<b>Ingestion</b>	LD50 Oral – rat – 670.0 mg/kg

### Carcinogenicity

<b>IARC</b>	2B: Possibly carcinogenic to humans (dichloroethane).
<b>ACGIH</b>	A4: Not classifiable as a human carcinogen dichloroethane).
<b>NTP</b>	Reasonably anticipated to be a human carcinogen (dichloroethane).
<b>OSHA</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### Signs & Symptoms of Exposure

<b>Skin</b>	Insensitivity to pain, fell of coldness or cold, skin looks white and feels hard and cold.
<b>Eyes</b>	Stinging pain, watering of eyes, inflammation of eyelids, conjunctivitis.
<b>Respiratory</b>	Rapid irregular breathing, headache, fatigue, mental confusion, nausea, vomiting, giddiness, poor judgment, convulsions, death.
<b>Ingestion</b>	Breath has sweet, organic odor, mental confusion, drowsiness, nausea, vomiting, headache.

<b>Chronic Toxicity</b>	Reproductive toxicity – rat – Inhalation Effects on fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants) Carcinogenicity – rat – Oral Tumorigenic: Carcinogenic by RTECS criteria. Gastrointestinal: Tumors. Skin and Appendages: Other: Tumors
<b>Teratogenicity</b>	Not Available
<b>Mutagenicity</b>	Genotoxicity in vitro – Ames test – S. Typhimurium - positive
<b>Embryotoxicity</b>	Not Available
<b>Target Organ(s)</b>	May cause respiratory irritation. Heart, Central nervous system, Liver, Kidney, Pancreas
<b>Reproductive Toxicity</b>	Reproductive toxicity - Rat - Inhalation Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).
<b>Respiratory/Skin Sensitization</b>	Not Available

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

<b>Aquatic Vertebrate</b>	LC50 – Oncorhynchus mykiss (rainbow trout) – 225.00 mg/l – 96 hours NOEC – Cyprinodon variegatus (sheepshead minnow) – 130 mg/l – 96 hours
<b>Aquatic Invertebrate</b>	EC50 – Daphnia magna (water flea) – 540.00 mg/l – 24 hours Immobilization EC50 – Daphnia magna (water flea) – 160 mg/l – 48 hours
<b>Terrestrial</b>	Not Available

<b>Persistence and Degradability</b>	Biotic/Aerobic Result: <20% - Not readily biodegradable.
<b>Bioaccumulative Potential</b>	Lepomis Macrochirus (Bluegill) – 14 days Bioconcentration factor (BCF): 2
<b>Mobility in Soil</b>	Not Available
<b>PBT and vPvB Assessment</b>	Not Available
<b>Other Adverse Effects</b>	Not Available

## 13. DISPOSAL CONSIDERATIONS

<b>Waste Product or Residues</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residue.
<b>Product Containers</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

## 14. TRANSPORTATION INFORMATION

US DOT	UN1184, Ethylene dichloride, 3, (6.1), pg II
TDG	UN1184, ETHYLENE DICHLORIDE, 3, (6.1), pg II
IMDG	UN1184, ETHYLENE DICHLORIDE, 3, (6.1), pg II
Marine Pollutant	No
IATA/ICAO	UN1184, Ethylene dichloride, 3, (6.1), pg II

## 15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA Active inventory.
DSL / NDSL	All ingredients are listed on the DSL inventory.
California Proposition 65	Listed: Ethylene Dichloride
Rhode Island: Hazardous Substance List	Listed: Ethylene Dichloride
Massachusetts: Toxic or Hazardous Substance List, Right to Know	Listed: Ethylene Dichloride
Pennsylvania: Hazardous Substance List	Listed: Ethylene Dichloride
New Jersey: Right to Know Hazardous Substance List	Listed: Ethylene Dichloride
SARA 302	Not Listed
SARA 304	Not Listed

SARA 311	Fire Hazard, Acute Health Hazard, Chronic Health Hazard.
SARA 312	Fire Hazard, Acute Health Hazard, Chronic Health Hazard.
SARA 313	Listed: Ethylene Dichloride
WHMIS Canada	Class B2: Flammable and combustible liquid – Flammable liquid. Class D1A: Poisonous and infectious material – Immediate and serious effects – Very toxic. D2A: Poisonous and infectious material – Other effects – Very toxic.

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## 16. OTHER INFORMATION

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Revision	Date
Original	07/16/2012
Revision 1	02/23/2015
Revision 2	09/09/2016
Revision 3	08/15/2022

Disclaimer: The information provided in this Safety Data Sheet (“SDS”) is correct to the best of our knowledge, information, and belief at the date of publication. The information in this SDS relates only to the specific Product identified under Section 1, and does not relate to its use in combination with other materials or products, or its use as to any particular process. Those handling, storing, or using the Product should satisfy themselves that they have current information regarding the particular way the Product is handled, stored or used and that the same is done in accordance with federal, state and local law. WE DO NOT MAKE ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING (WITHOUT LIMITATION) WARRANTIES WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN OR WITH RESPECT TO FITNESS FOR ANY PARTICULAR USE. WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, INJURY, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT.