RCI Labscan Limited

SAFETY DATA SHEET

According to Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
Revision Date Dec 08, 2025

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name	1, 2-DICHLOROETHANE
CAS-No.	107-06-2
Product code	AR1038, IR1038, LC1038, RP1038

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Chemical for analysis and production.

1.3 Details of the manufacturer of the safety data sheet

Manufacturer	RCI LABSCAN LIMITED. 24 Rama 1 Road, Pathumwan, Bangkok 10330 Thailand
Telephone number	(662) 613-7911-4
Fax number	(662) 613-7915

1.4 Emergency Telephone Number

Emergency phone	(662) 613-7911-4

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 2), H225
Acute toxicity, Oral (Category 4), H302
Acute toxicity, Inhalation (Category 3), H331
Skin irritation (Category 2), H315
Eye irritation (Category 2), H319
Carcinogenicity (Category 1B), H350
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335
Aspiration hazard (Category 1), H304
For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word Danger

Hazard statement(s)

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H350	May cause cancer.

Precautionary statement(s)	
P203	Obtain, read and follow all safety instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing vapours.
P264 + P265	Wash hands thoroughly after handling. Do not touch eyes.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P316	IF SWALLOWED: Get medical help immediately.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or 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.
P331	Do NOT induce vomiting.
P337 + P317	If eye irritation persists: Get medical help.

2.3 Other hazards None

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms 1, 2-Bichloroethane, Dichloro-1, 2-ethane, Ethane dichloride, Ethylene chloride, Ethylene dichloride, 1, 2-Ethylene dichloride, Glycol dichloride

CAS-No	EC-No	EC-Index-No	Formula	Molecular Weight	Weight %
107-06-2	203-458-1	602-012-00-7	$C_2H_4Cl_2$	98.96 g/mol	<=100

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Concentration	Classification
1, 2-Dichloroethane		
CAS-No 107-06-2 EC-No 203-458-1 EC-Index-No 602-012-00-7	<=100%	Flammable liquids (Category 2), H225 Acute toxicity, Oral (Category 4), H302 Acute toxicity, Inhalation (Category 3), H331 Skin irritation (Category 2), H315 Eye irritation (Category 2), H319 Carcinogenicity (Category 1B), H350 Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335 Aspiration hazard (Category 1), H304

For the full text of the H-Statements mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Move to fresh air in case of accidental inhalation of vapors. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus.
Skin contact	Remove contaminated clothing and wash affected skin with soap and water. If signs of poisoning appear, treat as for inhalation. . Obtain medical attention. Wash contaminated clothing before reuse. Contaminated combustible material, e.g. clothing ignites more readily and burns fiercely.

Eye contact	If the substance has got into the eyes, immediately wash out with plenty of water at least 15 minutes. Obtain medical attention.
Ingestion	Rinse mouth. Do not induce vomiting. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus. Obtain medical attention. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 2.2 and section 11

4.3 Indication of any immediate medical attention and special treatment needed

After swallowing: immediately make victim drink plenty of water. Subsequently administer: Activate charcoal 20-40 g in 10% slurry. Laxative: Sodium Sulfate 1 tablespoon/250 ml of water. Indications for the doctor: Gastric lavage. No milk, No castor oil, No alcohol.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Extinguish with carbon dioxide, dry chemical or foam. In the event of fire, cool tanks with water spray.

5.2 Special hazards arising from the substance or mixture

Vapors may form explosive mixture with air at ambient temperature. Flash back possible over considerable distance.

5.3 Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

5.4 Further information

Standard procedure for chemical fires. Take measures to prevent electrostatic charging. Prevent firefighting water from entering surface water or groundwater.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Do not breathe vapors or spray mist. Wear a positive-pressure supplied-air respirator, flame retardant antistatic protective clothing. Shut off leaks if without risk. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Contain or absorb leaking liquid with sand or earth, consults an expert. Prevent liquid entering sewers, basements and workpits. If substance has entered a water course or sewer or contaminated soil, advise police.

6.3 Methods and materials for containment and cleaning up

Spillage: May react with combustible substances creating fire or explosion hazard and formation of toxic fumes. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Soak up with inert absorbent material (e.g. sand, silica gel or chemical absorbent pads). Prevent liquid entering sewers, basements and workpits; vapor may create explosive atmosphere. Transfer to covered steel drums. Dispose of promptly.

6.4 Reference to other sections

For disposal see **Section 13**.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Keep container tightly closed. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing. Do not empty into drains.

7.2 Conditions for safe storage, including any incompatibilities

Keep tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Keep out of direct sunlight and away from incompatible materials. Store in original container. Electrical equipment should be protected to the appropriate standard.

Storage class 3(TRGS 510); Flammable liquids.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Ventilation hoods and fans required when working with organic solvents or in hot melt applications.

Individual protection measures (Personal protective equipment, PPE)

Eye/face protection

Goggles giving complete protection to eyes.

Skin protection

Chemical resistant apron / flame retardant antistatic protective clothing, heavy duty work shoes.

Handle with gloves

- Full contact wears gloves from viton material.
- Splash contact wears gloves from polychloroprene material.

The select protective gloves have to satisfy the specifications of EU Directive 89/686 EEC and standard EN 374 derived from it.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Required when vapor/aerosols are generated filter A (EN 141 or EN 14387).

Environmental exposure controls

Prevent liquid entering sewers, basements and workpits.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Color	Colorless
Odour	Characteristic
Odour Threshold	Not Available
pH	<1 at 25ºC
Melting point/range	-35 ºC
Boiling point/range	83.5 ºC at 1013 hPa

Flash point	13 ºC (closed cup)
Evaporation rate	Not Available
Flammability (solid, gas)	Not Available
Explosion limits: lower	6 % (V)
upper	11.4 % (V)
Vapor Pressure	87 hPa at 20ºC
Relative Vapor Density	3.4
Density	1.250 g/ml at 20ºC
Water solubility	8.7 g/l at 20ºC
Partition coefficient (n-octanol/water)	log Pow: 1.45
Auto-Ignition temperature	412.6 - 440 ºC
Decomposition Temperature	Not Available
Viscosity	0.82 - 0.84 mPa.s at 20ºC
Explosive properties	Not Explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.

SECTION 10: Stability and reactivity

10.1 Reactivity

Heat- sensitive, light- sensitive, unsuitable working materials: various plastic, rubber.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Risk of explosion in contact with alkali metals, metal powders, nitrogen dioxide.
The substance can react dangerously with nitric acid, oxidizing agents, alkali amides (like sodium amide), chlorine.

10.4 Conditions to avoid

Warming, flames, sparks and exposure to light.

10.5 Incompatible materials

Alkali metals, alkaline earth metals, aluminium in powder form, alkali amides, nitric acid, nitrogen oxide, oxidizing agents, chlorine, metal powders.

10.6 Hazardous decomposition products

Hydrochloric chloride gas, carbon monoxide and carbon dioxide. (Hazardous decomposition products from under fire condition).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD_{50} (oral, rat): 670 mg/kg
LC_{50} (inhalation, rat): 7.2 mg/l/4 h (vapor)
LD_{50} (dermal, rabbit): 2800 mg/kg

Acute oral toxicity

Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Acute inhalation toxicity

Irritations of the mucous membranes, coughing and dyspnoea.

Skin corrosion/irritation

Irritation

Serious eye damage/eye irritation
Severe irritations to eyes.

Respiratory or skin sensitization
Not Available

Germ cell mutagenicity
Ames test with S. typhimurium is positive.

Carcinogenicity
Animal experiments performed under conditions comparable with the workplace situation have shown the substance to be carcinogenic.

Reproductive toxicity
Not Available

Teratogenicity
Not Available

Specific target organ toxicity (STOT) - single exposure
May cause respiratory irritation.

Specific target organ toxicity (STOT) - repeated exposure
Not Available

Aspiration hazard
May cause pulmonary edema and pneumonitis.

Further information
After swallowing irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
Systemic effects: CNS disorders, dizziness, headache, tiredness, coma, respiratory paralysis, death.
Absorption may result in damage of liver and kidneys.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish	LC_{50} P.promelas: 116 mg/l /96h (in soft water)
Toxicity to daphnia and other aquatic invertebrates	EC_{50} Daphnia magna: 155 mg/l /48h (in soft water).
Toxicity to algae	IC_5 Desmodesmus subspicatus: 412 mg/l/7d
Toxicity to bacteria	EC_5 Ps. Putida: 135 mg/l /16d

12.2 Persistence and degradability
Biodegradability Slightly Biodegradable.

12.3 Bioaccumulative potential
Partition coefficient (n-octanol/water) log Pow: 1.45
No appreciable bioaccumulation potential is to be expected (log Po/w 1-3)

12.4 Mobility in soil
Not Available

12.5 Results of PBT and vPvB assessment
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.

12.6 Other adverse effects

Do not allow to enter waters, waste water or soil.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding law and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste or burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Contaminated packaging

Disposal in compliance with official regulations. Handle contaminated packaging as hazardous waste in the same way of the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

SECTION 14: Transport information

Land Transport (ADR/RID)

UN Number	1184
UN proper shipping name	ETHYLENE DICHLORIDE
Transport hazard class(es)	3 (6.1)
Packing group	II
Environmental hazards	No
Special precautions for user	Yes

Sea transport (IMDG)

UN Number	1184
UN proper shipping name	ETHYLENE DICHLORIDE
Transport hazard class(es)	3 (6.1)
Packing group	II
Marine pollutant	No
Special precautions for user	Yes
EmS	F-E S-D

Air transport (IATA)

UN Number	1184
UN proper shipping name	ETHYLENE DICHLORIDE
Transport hazard class(es)	3 (6.1)
Packing group	II
Environmental hazards	No
Special precautions for user	No

River transport (AND/ADNR)

(Not examined)

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Not Available

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

Recommended restrictions

Take notice of labels and safety data sheets for the working. Chemicals Take necessary action to avoid static electricity discharge.

Reference

Globally Harmonized System of Classification and Labelling of Chemicals (GHS).
Labelling according to EC Directives 67/548 EEC and Regulation (EC) No 1272/2008.
Transportation information according to Recommendations on the Transport of Dangerous Goods, Model Regulations. Twelfth revised edition. United Nations.
Institute for Occupational Safety and Health of the German Social Accident Insurance in Sankt Augustin/Germany, Source: IFA for Databases on hazardous substances (GESTIS).

Further information

Contact to RCI Labscan Limited.

Revision Date

08/12/2025