

Safety Data Sheet

according to 29 CFR 1910.1200(g)

1,2-Dichloroethane

Revision date: 07/03/2025

Product code: N-10154

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1. Identification

Product identifier

1,2-Dichloroethane

Substance name: 1,2-dichloroethane
CAS No: 107-06-2

Recommended use of the chemical and restrictions on use

Use of the substance/mixture

Reagents and laboratory chemicals
Only for laboratory and analysis purposes.

Uses advised against

Do not use for private purposes (household).

Details of the supplier of the safety data sheet

Company name: Chem Service, Inc.
an analytichem company
Street: 660 Tower Lane
Place: USA-PA 19381-0599 West Chester, United States
Telephone: 800-452-9994 / 610-692-3026
E-mail: info@chemservice.com
Contact person: SDS service department
E-mail: SDS@analytichem.com
Internet: www.chemservice.com
Responsible Department: SDS service department
Emergency phone number: Chemtrec US 800-424-9300 / Chemtrec outside US +1 703-527-3887

Further Information

No data available

2. Hazard(s) identification

Classification of the chemical

29 CFR Part 1910.1200

Flammable liquids: Flam. Liq. 2
Carcinogenicity: Carc. 1B
Germ cell mutagenicity: Muta. 2
Acute toxicity: Acute Tox. 3 (inhalation)
Acute toxicity: Acute Tox. 4 (oral)
Skin corrosion/irritation: Skin Irrit. 2
Serious eye damage/eye irritation: Eye Irrit. 2A
Specific target organ toxicity single exposure: STOT SE 3 (respiratory tract irritation)
Aspiration hazard: Asp. Tox. 1

Label elements

29 CFR Part 1910.1200

Signal word: Danger

Pictograms:



Hazard statements

Highly flammable liquid and vapor

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Harmful if swallowed
May be fatal if swallowed and enters airways
Causes skin irritation and serious eye irritation
Toxic if inhaled
May cause respiratory irritation
Suspected of causing genetic defects
May cause cancer

Precautionary statements

Dispose of contents/container to hazardous or special waste collection point.
Wash hands thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
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.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
Immediately call a poison center/doctor.
Rinse mouth.
Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Take off contaminated clothing and wash it before reuse.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Call a poison center/doctor.
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 exposed or concerned: Get medical advice/attention.
Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.

Hazards not otherwise classified

No data available

3. Composition/information on ingredients

Substances

Relevant ingredients

CAS No	Components	Quantity
107-06-2	1,2-dichloroethane	100 %

Further Information

No data available

4. First-aid measures

Description of first aid measures

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General information

First aider: Pay attention to self-protection!
Call a physician immediately.

After inhalation

Provide fresh air.
If breathing is irregular or stopped, administer artificial respiration.
Call a physician immediately.

After contact with skin

Wash immediately with: Water
Take off immediately all contaminated clothing and wash it before reuse.
Call a physician immediately.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.
Remove contact lenses, if present and easy to do. Continue rinsing.
Protect uninjured eye.

After ingestion

Provide fresh air.
Rinse mouth thoroughly with water.
Call a physician immediately.
Observe risk of aspiration if vomiting occurs.

Most important symptoms and effects, both acute and delayed

No data available

Indication of any immediate medical attention and special treatment needed

No data available

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

Full water jet

Specific hazards arising from the chemical

Combustible liquids Hazardous combustion products
In case of fire may be liberated: Carbon dioxide (CO₂) Carbon monoxide Hydrochloric gas
Vapors are heavier than air, spread along floors and form explosive mixtures with air.
Heating causes rise in pressure with risk of bursting.
Beware of reignition.

Special protective equipment and precautions for fire-fighters

In case of fire: Wear self-contained breathing apparatus.
Wear full chemical protective clothing.
In case of fire and/or explosion do not breathe fumes.

Additional information

Use water spray jet to protect personnel and to cool endangered containers.
Move undamaged containers from immediate hazard area if it can be done safely.
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

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General advice

Keep away from sources of ignition - No smoking.

This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe).

Take precautionary measures against static discharge.

For non-emergency personnel

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Consult an expert

Do not breathe dust/fume/gas/mist/vapors/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment (PPE): see section 8

Environmental precautions

Do not allow to enter into surface water or drains.

The vapors are heavier than air and can accumulate in high concentrations on the ground, in cavities, channels and cellars.

Danger of explosion

Methods and material for containment and cleaning up

For containment

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Collect in closed and suitable containers for disposal.

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wear breathing apparatus if exposed to vapors/dusts/aerosols.

Reference to other sections

Safe handling: see section 7

Personal protection equipment (PPE): see section 8

Disposal: see section 13

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Avoid exposure - obtain special instructions before use.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Read label before use. Handle and open container with care.

When using do not eat, drink, smoke, sniff. Keep container tightly closed.

Use personal protection equipment. Use extractor hood (laboratory).

Do not breathe dust/fume/gas/mist/vapors/spray. Provide adequate ventilation.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

Vapors may form explosive mixtures with air.

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Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of the protective agents should be clarified with their suppliers.

Further information on handling

Take off immediately all contaminated clothing and wash it before reuse. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in a cool, well-ventilated place. Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on joint storage

Do not store together with: Oxidising agent. Pyrophoric or self-heating substances.

Further information on storage conditions

Keep cool. Protect from sunlight.

8. Exposure controls/personal protection

Control parameters

Exposure limits

CAS No	Substance	ppm	mg/m ³	Category	Origin
107-06-2	Ethylene dichloride (1,2-Dichloroethane)	50	-	TWA (8 h)	PEL
		C 100	-	Ceiling	PEL
		200	-	5 min	PEL
107-06-2	Ethylene dichloride (Chloroethanes)	1	4	TWA (8 h)	REL
		2	8	STEL (15 min)	REL
107-06-2	Ethylene dichloride	10	40	TWA (8 h)	ACGIH-2024

Additional advice on limit values

Observe in addition any national regulations!

Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Do not breathe dust/fume/gas/mist/vapors/spray.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye/face protection.
goggles
Face protection umbrella

Hand protection

Tested protective gloves must be worn
The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

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Skin protection

Take off immediately all contaminated clothing and wash it before reuse.
Wear fire resistant or flame retardant clothing.
Wash hands and face before breaks and after work and take a shower if necessary.
Draw up and observe skin protection programme.

Respiratory protection

Wear breathing apparatus if exposed to vapors/dusts/aerosols.
The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented. A respiratory protection program that meets OSHA's 29 CFR 1910.134 requirements must be followed whenever workplace conditions warrant a respirator's use.

Thermal hazards

No data available

Environmental exposure controls

Do not allow to enter into surface water or drains.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	Liquid	
Color:	colorless	
Odor:	No data available	
Odour threshold:	No data available	
Melting point/freezing point:		No data available
Boiling point or initial boiling point and boiling range:		83(181.4F) °C
Flammability:		No data available
Lower explosion limits:		No data available
Upper explosion limits:		No data available
Flash point:		13(55.4F) CC °C
Auto-ignition temperature:		No data available
Decomposition temperature:		No data available
pH-Value:		No data available
Viscosity / kinematic:		No data available
Water solubility:		No data available
Solubility in other solvents		
not determined		
Dissolution rate:		No data available
Partition coefficient n-octanol/water:		No data available
Dispersion stability:		No data available
Vapor pressure:		105.2 hPa
(at 25 °C)		
Vapor pressure:		No data available
Density (at 25 °C):		1.256 g/cm³
Relative density:		No data available
Bulk density:		No data available
Relative vapour density:		No data available
Particle characteristics:		No data available

Other information

Information with regard to physical hazard classes

Explosive properties

Vapors may form explosive mixtures with air.

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Sustained combustibility:	No data available
Self-ignition temperature	
Solid:	not applicable
Gas:	not applicable
Oxidizing properties	
No data available	

Other safety characteristics

Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	No data available
Solid content:	No data available
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
No data available:	
Viscosity / dynamic:	No data available
Flow time:	No data available

Further Information

No data available

10. Stability and reactivity

Reactivity

Vapours may form explosive mixtures with air.

Chemical stability

Protect against: Heat

Possibility of hazardous reactions

Oxidising agent
Alkaline earth metals
Alkali metals
Nitric acid
Nitrogen oxides
Oxidising agent
Chlorine
Zinc
Alkali metal amides
Powdered magnesium
Aluminium
metals

Conditions to avoid

Heat, Radiant heat.

Incompatible materials

No data available

Hazardous decomposition products

SECTION 5: Fire fighting measures

Further information

No data available

11. Toxicological information

Route(s) of Entry

No data available

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Information on toxicological effects

Acute toxicity

Toxic if inhaled

Harmful if swallowed

CAS No	Components				
	Exposure route	Dose	Species	Source	Method
107-06-2	1,2-dichloroethane				
	oral	LD50 770 mg/kg	Rat	SIDS Initial Assessm	OECD Guideline 401
	dermal	LD50 4890 mg/kg	Rabbit	SIDS Initial Assessm	OECD Guideline 402
	inhalation vapour	ATE 3 mg/l			
	inhalation dust/mist	ATE 0,5 mg/l			

Irritation and corrosivity

Skin corrosion/irritation: Causes skin irritation

Serious eye damage/eye irritation: Causes serious eye irritation

Sensitizing effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

May cause cancer (1,2-dichloroethane)

Suspected of causing genetic defects (1,2-dichloroethane)

Reproductive toxicity: Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT) - single exposure

May cause respiratory irritation (1,2-dichloroethane)

Specific target organ toxicity (STOT) - repeated exposure

Based on available data, the classification criteria are not met.

Carcinogenicity (OSHA):

Not listed.

Carcinogenicity (IARC):

1,2-Dichloroethane (Ethylene Dichloride) (CAS 107-06-2) is listed in group 2B.

Carcinogenicity (NTP):

1,2-Dichloroethane (Ethylene Dichloride) (CAS 107-06-2) is listed in group RAHC.

Aspiration hazard

May be fatal if swallowed and enters airways

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

Information on other hazards

Endocrine disrupting properties

No data available

Other information

No data available

Further information

No data available

12. Ecological information

Persistence and degradability

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No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

Other adverse effects

No data available

Further information

Do not allow to enter into surface water or drains.

Avoid release to the environment.

13. Disposal considerations

Waste treatment methods

Disposal recommendations

Dispose of contents/container to hazardous or special waste collection point.

Do not allow to enter into surface water or drains.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

14. Transport information

U.S. DOT 49 CFR 172.101

<u>UN number or ID number:</u>	UN 1184
<u>Proper shipping name:</u>	ETHYLENE DICHLORIDE
<u>Transport hazard class(es):</u>	3
<u>Packing group:</u>	II
Hazard label:	3, 6.1
Special Provisions:	IB2, N36, T7, TP1
Limited quantity:	60 L

Marine transport (IMDG)

<u>UN number or ID number:</u>	UN 1184
<u>UN proper shipping name:</u>	ETHYLENE DICHLORIDE
<u>Transport hazard class(es):</u>	3
<u>Packing group:</u>	II
Hazard label:	3+6.1
Special Provisions:	-
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-E, S-D
Segregation group:	10 - liquid halogenated hydrocarbons

Air transport (ICAO-TI/IATA-DGR)

<u>UN number or ID number:</u>	UN 1184
<u>UN proper shipping name:</u>	ETHYLENE DICHLORIDE
<u>Transport hazard class(es):</u>	3
<u>Packing group:</u>	II
Hazard label:	3+6.1
Limited quantity Passenger:	1 L
Passenger LQ:	Y341
Excepted quantity:	E2

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IATA-packing instructions - Passenger:	352
IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	364
IATA-max. quantity - Cargo:	60 L

15. Regulatory information

U.S. Regulations

National regulatory information

SARA Section 304 CERCLA:

1,2-Dichloroethane (107-06-2): Reportable quantity = 100 (45.4) lbs. (kg)

SARA Section 311/312 Hazards:

1,2-Dichloroethane (107-06-2): Fire hazard, Delayed (chronic) health hazard, Immediate (acute) health hazard

SARA Section 313 Toxic release inventory:

1,2-Dichloroethane (107-06-2): De minimis limit = 0.1 %, Reportable threshold = Standard

Clean Air Act Section 112(b):

1,2-Dichloroethane (107-06-2)

State Regulations

Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)

WARNING: This product can expose you to chemicals including Ethylene dichloride (1,2-Dichloroethane) (cancer), which are known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

16. Other information

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Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Other data

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.