

Safety Data Sheet

Product : **Chloroethane (Ethyl chloride)**

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MSDS Nr : 356-00-2001BOC

Version : 1

Date : 03/02/2000

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

Product name	Chloroethane (Ethyl chloride)
Chemical formula	C ₂ H ₅ Cl
Company identification	see heading and/or footer
Emergency phone numbers	see heading and/or footer

2 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Preparation	Substance.
Components/Impurities	Contains no other components or impurities which will influence the classification of the product.
CAS Nr	00075-00-3
EC Nr (from EINECS)	200-830-5

3 HAZARDS IDENTIFICATION

Hazards identification	Extremely flammable Possible risks of irreversible effects Liquefied gas
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4 FIRST AID MEASURES

Inhalation	In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination. In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.
Skin/eye contact	In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Immediately flush eyes thoroughly with water for at least 15 minutes. Obtain medical assistance
Ingestion	Ingestion is not considered a potential route of exposure.

5 FIRE FIGHTING MEASURES

Specific hazards	Exposure to fire may cause containers to rupture/explode.
Hazardous combustion products	If involved in a fire the following toxic and/or corrosive fumes may be produced by thermal decomposition: Carbon monoxide Phosgene Hydrogen chloride
Suitable extinguishing media	All known extinguishants can be used.
Specific methods	If possible, stop flow of product. Move away from the container and cool with water from a protected position. Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous/explosive re-ignition may occur. Extinguish any other fire.

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Special protective equipment for fire fighters

Use self-contained breathing apparatus and chemically protective clothing.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions

Evacuate area.
Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
Ensure adequate air ventilation.
Eliminate ignition sources.

Environmental precautions

Try to stop release.
Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

Clean up methods

Ventilate area.

7 HANDLING AND STORAGE

Handling and storage

Ensure equipment is adequately earthed.
Suck back of water into the container must be prevented.
Purge air from system before introducing gas.
Do not allow backfeed into the container.
Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.
Keep away from ignition sources (including static discharges).
Segregate from oxidant gases and other oxidants in store.
Refer to supplier's container handling instructions.
Keep container below 50°C in a well ventilated place.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit value for country

Great Britain: LTEL: 1000 ppm; STEL: 1250 ppm (EH 40/97)
Germany: TRK: 9ppm
France: VME: 1000 ppm

Personal protection

Ensure adequate ventilation.
Do not smoke while handling product.

9 PHYSICAL AND CHEMICAL PROPERTIES

Molecular weight	64.5
Melting point	-138 °C
Boiling point	12.3 °C
Critical temperature	187 °C
Relative density, gas	2.2 (air=1)
Relative density, liquid	0.91 (water=1)
Vapour Pressure 20°C	1.3 bar
Solubility mg/l water	No reliable data available.

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Appearance/Colour	Colourless gas
Odour	Ethereal
Flammability range	Poor warning properties at low concentrations.
Autoignition temperature	3.6-14.8 vol% in air.
Other data	510 °C
	Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

10 STABILITY AND REACTIVITY

Stability and reactivity	Can form explosive mixture with air. May react violently with oxidants. Thermal decomposition yields toxic products which can be corrosive in the presence of moisture. Incompatible materials:- Potassium
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11 TOXICOLOGICAL INFORMATION

General	Overexposure may cause stomach cramps, vomiting and cough and may also cause kidney and liver damage. May produce irregular heart beat and nervous symptoms. May have carcinogenic effect. May cause dermatitis by skin contact.
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12 ECOLOGICAL INFORMATION

General	Toxic to water organisms. Not covered by the 'Montreal Protocol'.
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13 DISPOSAL CONSIDERATIONS

General	Avoid discharge to atmosphere. Do not discharge into areas where there is a risk of forming an explosive mixture with air. Waste gas should be flared through a suitable burner with flash back arrestor. Toxic and corrosive gases formed during combustion should be scrubbed before discharge to atmosphere. Do not discharge into any place where its accumulation could be dangerous. Contact supplier if guidance is required.
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14 TRANSPORT INFORMATION

UN Nr	1037
Class	2.1
ADR/RID Classification code	2F
ADR/RID Hazard Nr	23

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Labelling ADR

Label 2.1: flammable gas

Other transport information

Avoid transport on vehicles where the load space is not separated from the driver's compartment.

Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.

Before transporting product containers ensure that they are firmly secured and:

- cylinder valve is closed and not leaking
- valve outlet cap nut or plug (where provided) is correctly fitted
- valve protection device (where provided) is correctly fitted
- there is adequate ventilation.
- compliance with applicable regulations.

15 REGULATORY INFORMATION

Number in Annex I of Dir 67/548

602-009-00-0.

EC Classification

F+;R12|Carc.Cat.3;R40|R52/53

-Symbols

Xn: Harmful

F+: Extremely flammable

Labelling of cylinders

-Symbols

Label 2.1: flammable gas

-Risk phrases

R12 Extremely flammable.

R40 Possible risks of irreversible effects

R52/53 Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment.

-Safety phrases

S9 Keep container in well ventilated place.

S16 Keep away from ignition sources - No smoking.

S33 Take precautionary measures against static discharges.

S36/37 Wear suitable protective clothing and gloves.

S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

16 OTHER INFORMATION

Ensure all national/local regulations are observed.

Ensure operators understand the flammability hazard.

Ensure operators understand the toxicity hazard.

The hazard of asphyxiation is often overlooked and must be stressed during operator training.

May cause frostbite.

Users of breathing apparatus must be trained.

Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

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