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

### 1.1. Product identifier

Trade name	Chloroethane (R160)
Chemical description	Chloroethane, Ethyl chloride
CAS N°	75-00-3
CE N°	200-830-5
Index N°	602-009-00-0
Registration n°	01-2119487479-17
Chemical formula	C <sub>2</sub> H <sub>5</sub> Cl

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

Relevant identified uses	Industrial and professional Test gas/Calibration gas Chemical reaction / Synthesis Laboratory use Contact supplier for more information on uses
Uses advised against	For industrial and professional use only

### 1.3. Details of the supplier of the safety data sheet

Company identification	MULTIGAS Route de l'Industrie 102 CH-1564 Domdidier
Phone number	+41 (0) 26 676 94 94
E-mail address	<a href="mailto:info@multigas.ch">info@multigas.ch</a>

### 1.4. Emergency telephone numbers


145 (Toxicology Centre Zurich) or +41 (0) 44 251 51 51  
 +41 (0) 26 676 94 94 (Multigas)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable gases, Category 1	H220
Gases under pressure : Liquefied gas	H280

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Carcinogenicity, Category 2	H351
Hazardous to reproduction, Category 1B	H360FD
Hazardous to the aquatic environment — Chronic Hazard, Category 3	H412

For the complete H-sentences texts mentioned in that chapter, refer to Section 16

## 2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms



GHS02      GHS04      GHS08

Signal word

Danger

Hazard statements


H220	Extremely flammable gas
H280	Contains gas under pressure; may explode if heated
H351	Suspected of causing cancer
H360FD	May damage fertility or the unborn child
H412	Harmful to aquatic life with long lasting effects

Precautionary statements

P202	Do not handle until all safety precautions have been read and understood
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection
P308+P313	IF exposed or concerned: Get medical advice
P377	Leaking gas fire: Do not extinguish, unless leak can be stopped safely
P381	In case of leakage, eliminate all ignition sources
P405	Store locked up
P410+403	Protect from sunlight. Store in a well-ventilated place

## 2.3. Other hazards

None

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**SECTION 3: Composition/information on ingredients**

**3.1. Substances**

Name	Product identifier	Concentration	Classification
Chloroethane	(CAS-No.) 75-00-3 (EC-No.) 200-830-5 (EC Index-No.) 602-009-00-0 (Registration-No.) 01-2119487479-17	> 99%	Flam. Gas 1, H220 Carc. 2, H351 Press. Gas (Liq.), H280 Repr. 1B, H360FD Aquatic Chronic 3, H412

For the complete H-sentences texts mentioned in that chapter, refer to Section 16

Contains no other components or impurities which will influence the classification of the product

**3.2. Mixtures**

Not established

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

<b>General advice</b>	See a doctor. Show this safety data sheet to the attending physician
<b>In case of inhalation</b>	In case of inhalation, remove the person from the contaminated area. In case of respiratory arrest, give artificial respiration. See a doctor
<b>In case of skin contact</b>	Adverse effects not expected from this product
<b>In case of eyes contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a doctor
<b>In case of ingestion</b>	Ingestion is not considered a possible route of exposure

**4.2. Most important symptoms and effects, both acute and delayed**

Refer to section 11


**4.3. Indication of any immediate medical attention and special treatment needed**

None

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

<b>Suitable extinguishing media</b>	Dry powder
<b>Unsuitable extinguishing media</b>	Water spray or water mist. Carbon dioxide. Foam

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## **5.2. Special hazards arising from the substance or mixture**

<b>Specific hazards</b>	In case of fire or excessive heat, hazardous combustion products may be produced Exposure to fire may cause containers to rupture/explode
<b>Hazardous combustion products</b>	In case of fire or excessive heat, hazardous combustion products may be produced such as : carbon monoxide, phosgene, hydrogen chloride, chlorine

## **5.3. Additional information**

Cool endangered receptacles with water spray jet from a protected position

## **SECTION 6: Accidental release measures**

### **6.1. Personal precautions, protective equipment and emergency procedures**

Avoid breathing vapours, spray mists or gases  
Provide adequate ventilation  
Evacuate personnel to a safe place  
Personal protective equipment, see section 8

### **6.2. Environmental precautions**

No data available

### **6.3. Methods and material for containment and cleaning up**

Ventilate area  
Keep area evacuated and free from ignition sources until any spilled liquid has evaporated (ground free from frost)

### **6.4. Reference to other sections**

See also sections 8 and 13


## **SECTION 7: Handling and storage**

### **7.1. Precautions for safe handling**

Avoid contact with skin and eyes  
Avoid breathing vapour or mist  
Keep away from sources of ignition - No smoking  
For precautions, see section 2.2

### **7.2. Conditions for safe storage, including any incompatibilities**

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

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Suitable material: Standard carbon steel, tempered alloy steel, austenitic stainless steels

Content under pressure

### 7.3. Specific end use(s)

None

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Components with occupational exposure limits

Component	CAS N°	Exposure value type	Control parameter	Source
Chloroethane (R160)	75-00-3	TWA	9 ppm	SUVA: Limit values of exposure to workstations
			25 mg/m <sup>3</sup>	
		OEL	-	SUVA: Limit values of exposure to workstations
			-	

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

Provide adequate general and local exhaust ventilation

Gas detectors should be used when flammable gases may be released

#### 8.2.2. Individual protection measures, e.g. personal protective equipment

##### Eye/face protection

Wear goggles and a face shield when transfilling or breaking transfer connections. Standard EN 166

##### Skin / hand protection

Wear protective gloves when handling gas cylinders. Standard EN 388- Protective gloves against mechanical hazards Wear cold insulating gloves when transferring or disconnecting transfer lines Standard EN 511 - Insulating gloves against cold Wearing chemical resistant gloves Standard EN 374-Protective gloves against chemicals

##### **For long-term use**

Material: Fluorinated rubber

Penetration time: 480 min

Glove thickness: 0.7 mm

##### **For short-term use**

Material: Fluorinated rubber


Penetration time: 480 min

Glove thickness: 0.7 mm

Have appropriate, chemical-resistant protective clothing ready for use in emergencies

##### Respiratory protection

When the risk assessment shows that the use of respirable respirators is appropriate, use a full face mask with EN 14387 multipurpose cartridge. If

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the mask is the only means of protection, use a full face respirator. Use NIOSH (US) or CEN (EU) tested and approved equipment

### 8.2.3. Environmental exposure controls

No data available

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Appearance

- Physical state at 20°C / 101.3kPa Gas
- Colour Colourless

#### Odour

Ethereal

#### Odour threshold

No data available

#### pH

No data available

#### Melting point / Freezing point

-142°C

#### Boiling point

13.1°C

#### Flash point

-43°C (Closed cup)

#### Evaporation rate

No data available

#### Flammability (solid, gas)

Extremely flammable gas

#### Explosive limits

3.6 – 15%

#### Vapour pressure [20°C]

1.3 bar

#### Vapour pressure [50°C]

3.6 bar

#### Vapour density

No data available

#### Relative density, liquid (water=1)

0.92

#### Relative density, gas (air=1)

2.31

#### Water solubility

5.74 g/l

#### Partition coefficient

1.43

#### n-octanol/water (Log Kow)

#### Auto-ignition temperature

519°C

#### Decomposition temperature

No data available

#### Viscosity

No data available

#### Explosive properties

No data available

#### Oxidising properties

No data available


### 9.2. Other information

#### Molar mass

64.52 g/mol

#### Critical temperature [°C]

187.2°C

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**Relative vapour density**

Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Formation of explosive gas mixtures with air

### 10.2. Chemical stability

Stable under recommended storage conditions

### 10.3. Possibility of hazardous reactions

Can form explosive mixture with air.  
 May react violently with oxidants  
 Alkali metals, aluminium, alkaline earth metals, zinc

### 10.4. Conditions to avoid

Keep away from heat/sparks/open flames/hot surfaces. – No smoking

### 10.5. Incompatible materials

Alkali metals, alkaline earth metals, oxidizing agent, zinc  
 Water / moisture  
 May react with aluminium  
 For additional information on compatibility refer to ISO 11114


### 10.6. Hazardous decomposition products

Hydrochloric gas  
 Phosgene

## SECTION 11: Toxicological information

### 11.1. Chemical safety assessment

<b>Acute toxicity</b>	Toxicological effects not expected from this product if occupational exposure limit values are not exceeded
<b>Skin corrosion/irritation</b>	No data available
<b>Serious eye damage/irritation</b>	No data available
<b>Respiratory or skin sensitisation</b>	No data available
<b>Germ cell mutagenicity</b>	No data available
<b>Carcinogenicity</b>	Suspected of causing cancer

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Reproductive toxicity	No data available
STOT-single exposure – Target organ(s)	No data available
STOT-repeated exposure	No data available
Ingestion hazard	No data available

### **11.2 Information on other hazards**

No data available

## SECTION 12: Ecological information

### **12.1. Toxicity**

Assessment Harmful to aquatic life with long lasting effects

### **12.2. Persistence and degradability**

No data available

### **12.3. Bioaccumulative potential**

No data available

### **12.4. Mobility in soil**

No data available

### **12.5. Results of PBT and vPvB assessment**

PBT / vPvB assessment is not available because the chemical safety assessment is not required / is not conducted

### **12.6. Endocrine disrupting properties**

The substance/mixture does not contain components which, in accordance with Article 57(f) of REACH or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities equal to or greater than 0.1%, exhibit endocrine disrupting properties

### **12.7. Other adverse effects**

No data available

## SECTION 13: Disposal considerations

### **13.1. Waste treatment methods**

Product Must not be discharged to atmosphere



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**MTG028**

Burn in a chemical incinerator equipped with an afterburner and scrubber  
 Return unused product in original cylinder to supplier

**Contaminated container**

Eliminate as unused product  
 Contact the supplier if instructions are needed

**OMoD Code**

16 05 04  
 Gases in pressure containers containing dangerous substances

**SECTION 14: Transport information**

**14.1. UN number**

Transport par road/rail ADR / RID	Transport by sea IMDG	Transport by air IATA
1037	1037	1037

**14.2. UN proper shipping name**

Transport par road/rail ADR / RID	Transport by sea IMDG	Transport by air IATA
Ethyl chloride	Ethyl chloride	Ethyl chloride

**14.3. Transport hazard class(es)**

**Labelling**



ADR/RID  
 IMDG  
 IATA

2.1 : Flammable gases

**14.4. Packing group**

ADR/RID  
 IMDG  
 IATA

Not established


**14.5. Environmental hazards**

ADR/RID  
 IMDG  
 ICAO-TI / IATA-DGR

None  
 None  
 None

**14.6. Special precautions for user**

No data available

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#### **14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable

### **SECTION 15: Regulatory information**

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


This safety data sheet complies with the requirements of Regulation (CE) No. 1907/2006

#### **15.2. Chemical safety assessment**

A CSA has been carried out

### **SECTION 16: Other information**

<b>Indication of changes</b>	Revised safety data sheet in accordance with commission regulation (EU) No 2015/830
<b>Abbreviations and acronyms</b>	<p>ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road</p> <p>CAS : Chemical Abstract Service number (USA)</p> <p>CLP : Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008</p> <p>CSA : Chemical Safety Assessment</p> <p>EIGA : European Industrial Gases Association</p> <p>EINECS : European Inventory of Existing Commercial Chemical Substances</p> <p>EN : European Standard</p> <p>ATE : Acute Toxicity Estimate</p> <p>IATA : International Air Transport Association</p> <p>IMDG Code : International Maritime Dangerous Goods Code</p> <p>LC50 : Lethal Concentration to 50 % of a test population</p> <p>OMoD : Swiss Ordinance on the movement of waste</p> <p>PBT : Persistent, Bioaccumulative and Toxic</p> <p>PPE: Personal Protection Equipment</p> <p>REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006</p> <p>RID : Regulations concerning the international carriage of dangerous goods by rail</p> <p>RMM : Risk Management Measures</p> <p>STOT-SE : Specific Target Organ Toxicity - Single Exposure</p> <p>UN : United Nations</p> <p>vPvB : Very Persistent and Very Bioaccumulative</p> <p>WGK: Water Hazards Class</p>

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**Full text of H, EUH and P statements used in sections 2 and 3**

**Hazard statements**

H220	Extremely flammable gas
H280	Contains gas under pressure; may explode if heated
H351	Suspected of causing cancer
H360FD	May damage fertility or the unborn child
H412	Harmful to aquatic life with long lasting effects

**Precautionary statements**

P202	Do not handle until all safety precautions have been read and understood
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P381	In case of leakage, eliminate all ignition sources
P405	Store locked up
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**Disclaimer of liability**

Details given in this document have been prepared based on the most available reliable documents and are believed to be correct at the time of going to press  
They do not claim to be exhaustive and should be considered as a guide