

Safety data sheet

Ethylene

Creation date : 28.01.2005
Revision date : 04.01.2011

Version : 6.0

DE / E

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1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

Product name

Ethylene
EC No (from EINECS): 200-815-3
CAS No: 74-85-1
Index-Nr. 601-010-00-3

Chemical formula

REACH Registration number:

Not available.

Known uses

Not known.

Company identification

Linde AG, Linde Gas Division, Seitnerstraße 70, D-82049 Pullach
E-Mail Address Info@de.linde-gas.com
Emergency phone numbers (24h): 089-7446-0

2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification acc. to Regulation (EC) No 1272/2008/EC (CLP/GHS)

Press. Gas (Liquefied gas) - Contains gas under pressure; may explode if heated.
Flam. Gas 1 - Extremely flammable gas.
STOT SE 3 - May cause drowsiness or dizziness.

Classification acc. to Directive 67/548/EEC & 1999/45/EC

F+; R12 | R67

Extremely flammable.

Vapours may cause drowsiness and dizziness.

Risk advice to man and the environment

Compressed gas.

Label Elements

- Labelling Pictograms



- Signal word

Danger

- Hazard Statements

H280 Contains gas under pressure; may explode if heated.
H220 Extremely flammable gas.
H336 May cause drowsiness or dizziness.

- Precautionary Statements

Precautionary Statement Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260 Do not breathe gas, vapours.

Precautionary Statement Reaction

P304+P340+P315 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention.

P377

Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

P381

Eliminate all ignition sources if safe to do so.

Precautionary Statement Storage

P403

Store in a well-ventilated place.

Precautionary Statement Disposal

None.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Preparation: Substance.

Components/Impurities

Ethylene

CAS No: 74-85-1

Index-Nr.: 601-010-00-3

EC No (from EINECS): 200-815-3

REACH Registration number:

Not available.

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

4 FIRST AID MEASURES

Inhalation

In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of coordination. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

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

Incomplete combustion may form carbon monoxide.

Suitable extinguishing media

All known extinguishants can be used.

Specific methods

If possible, stop flow of product. Move container away or 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.

Special protective equipment for fire fighters

In confined space use self-contained breathing apparatus.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Evacuate area. 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.

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7 HANDLING AND STORAGE

Handling

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). Refer to supplier's handling instructions.

Storage

Secure cylinders to prevent them falling. Segregate from oxidant gases and other oxidants in store. Keep container below 50°C in a well ventilated place. Observe "Technische Regeln Druckgase (TRG) 280 Ziffer 5"

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protection

Ensure adequate ventilation. Do not smoke while handling product. Carry working gloves and protection shoes while handling gas cylinders.

9 PHYSICAL AND CHEMICAL PROPERTIES

General information

Appearance/Colour: Colourless gas.

Odour: Poor warning properties at low concentrations. Sweetish.

Important information on environment, health and safety

Molecular weight: 28 g/mol

Melting point: -169 °C

Boiling point: -103 °C

Critical temperature: 9,5 °C

Autoignition temperature: 425 °C

Flammability range: 2,3 %(V) - 34 %(V)

Relative density, gas: 1

Relative density, liquid: 0,57

Vapour Pressure 20 °C: Not applicable.

Solubility mg/l water: No reliable data available.

Other data

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

10 STABILITY AND REACTIVITY

Stability and reactivity

May decompose violently at high temperature and/or pressure or in the presence of a catalyst. Can form explosive mixture with air. May react violently with oxidants.

11 TOXICOLOGICAL INFORMATION

Acute toxicity

No known toxicological effects from this product.

12 ECOLOGICAL INFORMATION

General

No known ecological damage caused by this product.

13 DISPOSAL CONSIDERATIONS

General

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. Do not discharge into any

place where its accumulation could be dangerous. Contact supplier if guidance is required.

EWC Nr. 16 05 04*

14 TRANSPORT INFORMATION

ADR/RID

Class 2 Classification Code 2F

UN number and proper shipping name

UN 1962 Ethylene

UN 1962 Ethylene

Labels 2.1 Hazard number 23

IMDG

Class 2.1

UN number and proper shipping name

UN 1962 Ethylene

Labels 2.1

Packing Instruction P200

EmS FD,SU

IATA

Class 2.1

UN number and proper shipping name

UN 1962 Ethylene

Labels 2.1

Packing Instruction P200

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

15 REGULATORY INFORMATION

Further national regulations

Pressure Vessel Regulation

Gefahrstoffverordnung (GefStoffV)

Technische Regeln für Gefahrstoffe (TRGS)

Regulations for the prevention of industrial accidents

Water pollution class

Not polluting to waters according to VwVwS from 17.05.99.

TA-Luft

Not classified according to TA-Luft.

16 OTHER INFORMATION

Ensure all national/local regulations are observed. Ensure operators understand the flammability hazard. The hazard of asphyxiation is often overlooked and must be stressed during operator training. Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

Advice

Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted. Details given in this document are believed to be correct at the time of going to press.

Further information

Hommel: Handbook of dangerous goods

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Kühn-Birett: Merkblätter gefährliche Arbeitsstoffe
Linde safety advice

End of document