

## Safety data sheet Acetylene, dissolved

Creation date : 19.05.2006  
Revision date : 19.05.2006

Version : 1.0

DE / E

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### 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

**Product name**

Acetylene, dissolved

**Chemical formula** C<sub>2</sub>H<sub>2</sub>

**Known uses**

Not known.

**Company identification**

Linde AG, Gas and Engineering, Linde Gas Division Seitnerstraße  
70, D-82049 Pullach

**Emergency phone numbers:** +49-89-7446-0

### 2 COMPOSITION/INFORMATION ON INGREDIENTS

**Substance/Preparation:** Substance

**Components/Impurities**

**CAS Nr:** 74-86-2

**EEC Nr (from EINECS) :** 200-816-9

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

### 3 HAZARDS IDENTIFICATION

**Classification**

Heating may cause an explosion.

Explosive with or without contact with air.

Extremely flammable.

**Risk advice to man and the environment**

Dissolved gas

### 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. 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.

**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. 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 container handling instructions.

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

### 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

**Personal protection**

Ensure adequate ventilation. Do not smoke while handling product. Wear suitable hand, body and head protection. Wear goggles with suitable filter lenses when use is cutting/welding.

### 9 PHYSICAL AND CHEMICAL PROPERTIES

**General information**

**Appearance/Colour:** Colourless gas

**Odour:** Garlic like Poor warning properties at low concentrations.

**Important information on environment, health and safety**

**Molecular weight:** 26 g/mol

**Melting point:** -80,8 °C

**Boiling point:** -84 °C

**Critical temperature:** 35,2 °C

**Autoignition temperature:** 325 °C

**Flammability range:** 2,4 %(V) - 88 %(V)

**Relative density, gas:** 0,9

**Relative density, liquid:** Not applicable

**Solubility mg/l water:** 1185 mg/l

**Maximum filling pressure (bar):** 19 bar

### 10 STABILITY AND REACTIVITY

**Stability and reactivity**

Can form explosive mixture with air. May decompose violently at high temperature and/or pressure or in the presence of a catalyst Forms explosive acetylides with copper, silver and mercury. Do not use alloys containing more than 70% copper. May react violently with oxidants.

### 11 TOXICOLOGICAL INFORMATION

**General**

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 01**

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### 14 TRANSPORT INFORMATION

#### ADR/RID

Class 2 Classification Code 4F

#### UN number and proper shipping name

UN 1001 Acetylene, dissolved

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ADR/RID-Labels 2.1 Hazard number 239

Packing Instruction P200

#### IMDG

Class 2.1

#### UN number and proper shipping name

UN 1001 Acetylene, dissolved

ADR/RID-Labels 2.1

Packing Instruction P200

EmS FD, SU

#### IATA

Class 2.1

#### UN number and proper shipping name

UN 1001 Acetylene, dissolved

ADR/RID-Labels 2.1

Packing Instruction P200

#### Other transport information

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

601-015-00-0

#### EC Classification

F+; R12, R5, R6

### Labelling

#### - Symbols

F+ Extremely flammable.

#### - Risk Phrases

R5 Heating may cause an explosion.

R6 Explosive with or without contact with air.

R12 Extremely flammable.

#### - Safety Phrases

S9 Keep container in well ventilated place.

S16 Keep away from ignition source - No smoking.

S33 Take precautionary measures against static discharges.

S7 Keep container tightly closed.

#### Further national regulations

Pressure Vessel Regulation

Regulations for the prevention of industrial accidents

Technische Regeln für Gefahrstoffe (TRGS)

#### Water pollution class

Not polluting to waters according to VwVwS from 17.05.99.

### 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 informations

Linde safety advice

No. 2 Handling of gas cylinders at and after fire / heat exposure

No. 3 Oxygen deficiency

No. 7 Safe handling of gas cylinders and cylinder bundles

No. 10 Handling of acetylene

No. 11 Transport of gas receptacles in vehicles

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