

Safety data sheet

Carbon monoxide, compressed.

Creation date : 28.01.2005
Revision date : 20.12.2010

Version : 2.0

DE / E

SDS No. : 019
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1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

Product name

Carbon monoxide, compressed.
EC No (from EINECS): 211-128-3
CAS No: 630-08-0
Index-Nr. 006-001-00-2

Chemical formula CO

REACH Registration number:

01-2119480165-39-0000

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 - Contains gas under pressure; may explode if heated.

Flam. Gas 1 - Extremely flammable gas.

Repr. 1A - May damage the unborn child.

Acute Tox. 3 - Toxic if inhaled.

STOT RE 1 - Causes damage to organs through prolonged or repeated exposure.

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

F+; R12 | Repr. Cat.1; R61 | T; R23, R48/23

May cause harm to the unborn child.

Toxic by inhalation.

Toxic: danger of serious damage to health by prolonged exposure through inhalation.

Extremely flammable.

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.
H360 May damage fertility or the unborn child.
H331 Toxic if inhaled.
H372 Causes damage to organs through prolonged or repeated exposure.

- Precautionary Statements

Precautionary Statement Prevention

P210 Keep away from heat/sparks/open

P202 flames/hot surfaces. - No smoking.
Do not handle until all safety precautions have been read and understood.
P260 Do not breathe gas, vapours.

Precautionary Statement Reaction

P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 Eliminate all ignition sources if safe to do so.
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.
P308 + P313 IF exposed or concerned: Get medical advice/attention.

Precautionary Statement Storage

P403 Store in a well-ventilated place.
P405 Store locked up.

Precautionary Statement Disposal

3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Preparation: Substance.

Components/Impurities

Carbon monoxide, compressed.

CAS No: 630-08-0

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

4 FIRST AID MEASURES

Inhalation

Toxic by inhalation. Symptoms may include dizziness, headache, nausea and loss of co-ordination. 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

None.

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

Use self-contained breathing apparatus and chemically protective clothing.

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6 ACCIDENTAL RELEASE MEASURES**Personal precautions**

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

Environmental precautions

Try to stop release.

Clean up methods

Ventilate area.

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**Exposure limit value**

Value type	value	Note
Germany - AGW	30 ppm	TRGS 900
TLV (ACGIH)	25 ppm	ACGIH 1995 - 1996

Personal protection

Ensure adequate ventilation. Do not smoke while handling product. Keep self contained breathing apparatus readily available for emergency use. Devices for the escape such as suitable filters should be hold ready. Carry working gloves and protection shoes while handling gas cylinders.

9 PHYSICAL AND CHEMICAL PROPERTIES**General information**

Appearance/Colour: Colourless gas.

Odour: None. No odour warning properties.

Important information on environment, health and safety

Molecular weight: 28 g/mol

Melting point: -205 °C

Boiling point: -192 °C

Critical temperature: -140 °C

Autoignition temperature: 620 °C

Flammability range: 11 %(V) - 74 %(V)

Relative density, gas: 1

Relative density, liquid: 0,79

Vapour Pressure 20 °C: Not applicable.

Solubility mg/l water: 30 mg/l

10 STABILITY AND REACTIVITY**Stability and reactivity**

Can form explosive mixture with air. May react violently with oxidants.

11 TOXICOLOGICAL INFORMATION**Acute toxicity**

Damage to red blood cells (haemolytic poison).

LC50/1h (ppm) 3760 ppm

Carcinogenic, mutagenic and teratogenic effects

May cause harm to the unborn child.

12 ECOLOGICAL INFORMATION**General**

No known ecological damage caused by this product.

13 DISPOSAL CONSIDERATIONS**General**

Avoid discharge to atmosphere. Do not discharge into any place where its accumulation could be dangerous. Waste gas should be flared through a suitable burner with flash back arrestor. Contact supplier if guidance is required.

EWC Nr. 16 05 04*

14 TRANSPORT INFORMATION**ADR/RID**

Class	2	Classification Code	1TF
UN number and proper shipping name			
UN 1016 Carbon monoxide, compressed			
UN 1016 Carbon monoxide, compressed			
Labels	2.3, 2.1	Hazard number	263

IMDG

Class	2.3
UN number and proper shipping name	
UN 1016 Carbon monoxide, compressed	
Labels	2.3, 2.1
Packing Instruction	P200
EmS	FD, SU

IATA

Class	2.3
UN number and proper shipping name	
UN 1016 Carbon monoxide, compressed	
Labels	2.3, 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

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Further national regulations

Pressure Vessel Regulation
Gefahrstoffverordnung (GefStoffV)
Technische Regeln für Gefahrstoffe (TRGS)
Regulations for the prevention of industrial accidents

Water pollution class

according to §19 WGH Annex 1 : WGK 1 (slightly water endangering)

16 OTHER INFORMATION

Ensure all national/local regulations are observed. Ensure operators understand the flammability hazard. Users of breathing apparatus must be trained. Ensure operators understand the toxicity hazard. 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

Kühn-Birett: Merkblätter gefährliche Arbeitsstoffe
Hommel: Handbook of dangerous goods
Linde safety advice

End of document