

**Material Safety Data Sheet
Carbon Monoxide, Compressed**

Creation Date: 25.01.2008

MSDS No. : AX-02
Page 1 / 3**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY**

Product name: Carbon Monoxide, Compressed
Chemical formula: CO
Known uses: Not known
Company: Axcel Gases
Head Office:
1K/49, NIT, Faridabad, 121001, India
Email: info@axcelgases.com
Works:
80 KM Delhi-Jaipur Highway, Distt. Rewari, 123106
Haryana, India
Email: info@axcelgases.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Preparation: Substance
Components/Impurities CAS Nr: 630-08-0
EEC Nr (from EINECS) : 211-128-3
Contains no other components or impurities which will influence the classification of the product.

3. HAZARDS IDENTIFICATION

Classification: 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

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. Extinguish any other fire.
Special protective equipment for fire fighters: Use self-contained breathing apparatus and chemically protective clothing.

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

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 container handling instructions.
Prevent bottles from falling down. 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"

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Page 2 / 3**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Exposure limit value**

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

Exposure limit value

Value type	Comp.	value	Note
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Personal Protection: Ensure adequate ventilation. Do not smoke while handling product. Keep self contained breathing apparatus readily available for emergency use. If concentration is below 2% you can use for escaping an ABEK- Filter 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

Packing group II



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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

Number in Annex I of Dir 67/548

601-015 -00-0

EC Classification

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

Labelling - Symbols

F+ Extremely flammable.

T Toxic

- Risk Phrases

R61:- May cause harm to the unborn child.

R23:- Toxic by inhalation.

R48/23:- Toxic danger of serious damage to health by prolonged exposure through inhalation.

R12:- Extremely flammable.

-Safety Phrases

S53:- Avoid exposure, obtain special instructions before use.

S45:- In case of accident or if you feel unwell, seek medical advice immediately (Show the label where possible).

Further national regulations :-

Pressure Vessel Regulation

Regulations for the prevention of industrial accidents

Gefahrstoffverordnung (GefStoffV)

Technische Regeln für Gefahrstoffe (TRGS)

Water pollution class

According to § 19 W G H 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

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