

# CD - Carbon monoxide 1% - 9.3%

## Safety Data Sheet P-18-0724

This SDS conforms to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.  
 Date of issue: 05/21/2015    Revision date: 08/01/2016    Supersedes: 05/21/2015

### SECTION 1: Product and company identification

#### 1.1. Product identifier

Product form : Mixture  
 Name : CD - Carbon monoxide 1% - 9.3%  
 Other means of identification : Mixture Carbon monoxide and Carbon dioxide

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

Use of the substance/mixture : Industrial use; Follow the instructions provided by the manufacturer

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

Praxair, Inc.  
 39 Old Ridgebury Road  
 Danbury, CT 06810-5113 - USA  
 T 1-800-772-9247 (1-800-PRAXAIR) - F 1-716-879-2146  
[www.praxair.com](http://www.praxair.com)

#### 1.4. Emergency telephone number

Emergency number : Onsite Emergency: 1-800-645-4633

CHEMTREC, 24 hr/day 7 days/week  
 — Within USA: 1-800-424-9300, Outside USA: 001-703-527-3887  
 (collect calls accepted, Contract 17729)

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Liquefied gas H280  
 Repr. 1A H360  
 STOT RE 1 H372

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



GHS04

GHS08

Signal word (GHS-US) :

DANGER

Hazard statements (GHS-US) :

H280 - CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED  
 H360 - May damage fertility or the unborn child  
 H372 - CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE  
 CGA-HG03 - MAY INCREASE RESPIRATION AND HEART RATE  
 CGA-HG10 - ASPHYXIATING EVEN WITH ADEQUATE OXYGEN

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use  
 P202 - Do not handle until all safety precautions have been read and understood  
 P260 - Do not breathe gas/vapours  
 P264 - Wash exposed skin thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P308+P313 - If exposed or concerned: Get medical advice/attention  
 P314 - Get medical advice/attention if you feel unwell  
 P405 - Store locked up  
 P501 - Dispose of contents/container in accordance with container Supplier/owner instructions  
 P261 - Avoid breathing gas

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CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52°C (125°F)  
P271+P403 - Use and store only outdoors or in a well-ventilated place

### 2.3. Other hazards

Other hazards not contributing to the classification

: Asphyxiant in high concentrations

Chemical asphyxiant. Exposure to low concentrations for extended periods may result in dizziness or unconsciousness, and may lead to death.

### 2.4. Unknown acute toxicity (GHS US)

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product identifier	%
Carbon dioxide	(CAS No) 124-38-9	90.7 - 99
Carbon monoxide	(CAS No) 630-08-0	1 - 9.3

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation

: Remove to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, trained personnel should give oxygen. Call a physician.

First-aid measures after skin contact

: Adverse effects not expected from this product. If skin irritation occurs: Wash with plenty of soap and water. If irritation persists, consult a doctor. The liquid may cause frostbite. For exposure to liquid, immediately warm frostbite area with warm water not to exceed 105°F (41°C). Water temperature should be tolerable to normal skin. Maintain skin warming for at least 15 minutes or until normal coloring and sensation have returned to the affected area. In case of massive exposure, remove clothing while showering with warm water. Seek medical evaluation and treatment as soon as possible.

First-aid measures after eye contact

: Immediately flush eyes thoroughly with water for at least 15 minutes. Immediately flush eyes thoroughly with water for at least 15 minutes. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. Contact an ophthalmologist immediately.

First-aid measures after ingestion

: Ingestion is not considered a potential route of exposure.

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

No additional information available

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

Obtain medical assistance.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media

: Use extinguishing media appropriate for surrounding fire.

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

Fire hazard

: Not flammable.

Reactivity

: None.

### 5.3. Advice for firefighters

Firefighting instructions

: **DANGER!**

Compressed gas: asphyxiant

Suffocation hazard by lack of oxygen

Evacuate all personnel from the danger area. Use self-contained breathing apparatus (SCBA) and protective clothing. Immediately cool containers with water from maximum distance. Stop flow of gas if safe to do so, while continuing cooling water spray. Remove ignition sources if safe to do so. Remove containers from area of fire if safe to do so. On-site fire brigades must comply with OSHA 29 CFR 1910.156 and applicable standards under 29 CFR 1910 Subpart L—Fire Protection.

Special protective equipment for fire fighters

: Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters.

Other information

: Containers are equipped with a pressure relief device. (Exceptions may exist where authorized by TC.).

## SECTION 6: Accidental release measures

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

General measures

: **DANGER! Compressed gas: asphyxiant.** Evacuate personnel to a safe area. Appropriate self-contained breathing apparatus may be required. Approach suspected leak area with caution. Remove all sources of ignition, if safe to do so. Reverse flow into cylinder may cause rupture. Reduce gas with fog or fine water spray. Ventilate area or move container to a well-ventilated area. Before entering the area, especially a confined area, check the atmosphere with an appropriate device.

#### 6.1.1. For non-emergency personnel

No additional information available

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Try to stop release. Prevent waste from contaminating the surrounding environment. Prevent soil and water pollution. Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

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

No additional information available

### 6.4. Reference to other sections

See also sections 8 and 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling

: Wear leather safety gloves and safety shoes when handling cylinders. Protect cylinders from physical damage; do not drag, roll, slide or drop. While moving cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Never insert an object (e.g. wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. If the valve is hard to open, discontinue use and contact your supplier. Close the container valve after each use; keep closed even when empty. Never apply flame or localized heat directly to any part of the container. High temperatures may damage the container and could cause the pressure relief device to fail prematurely, venting the container contents. For other precautions in using this product, see section 16.

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

Storage conditions : Store in a cool, well-ventilated place. Store and use with adequate ventilation. Store only where temperature will not exceed 125°F (52°C). Firmly secure containers upright to keep them from falling or being knocked over. Install valve protection cap, if provided, firmly in place by hand. Store full and empty containers separately. Use a first-in, first-out inventory system to prevent storing full containers for long periods

**OTHER PRECAUTIONS FOR HANDLING, STORAGE, AND USE:** When handling product under pressure, use piping and equipment adequately designed to withstand the pressures to be encountered. Never work on a pressurized system. Use a back flow preventive device in the piping. Gases can cause rapid suffocation because of oxygen deficiency; store and use with adequate ventilation. If a leak occurs, close the container valve and blow down the system in a safe and environmentally correct manner in compliance with all international, federal/national, state/provincial, and local laws; then repair the leak. Never place a container where it may become part of an electrical circuit.

### 7.3. Specific end use(s)

None.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Carbon monoxide (630-08-0)		
ACGIH	ACGIH TLV-TWA (ppm)	25 ppm
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	55 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	50 ppm
Carbon dioxide (124-38-9)		
ACGIH	ACGIH TLV-TWA (ppm)	5000 ppm
ACGIH	ACGIH TLV-STEL (ppm)	30000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	9000 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	5000 ppm

### 8.2. Exposure controls

Appropriate engineering controls : Provide adequate general and local exhaust ventilation. Ensure exposure is below occupational exposure limits (where available).

Eye protection : Wear safety glasses when handling cylinders; vapor-proof goggles and a face shield during cylinder changeout or whenever contact with product is possible. Select eye protection in accordance with OSHA 29 CFR 1910.133.

Skin and body protection : Wear metatarsal shoes and work gloves for cylinder handling, and protective clothing where needed. Wear appropriate chemical gloves during cylinder changeout or wherever contact with product is possible.

Respiratory protection : When workplace conditions warrant respirator use, follow a respiratory protection program that meets OSHA 29 CFR 1910.134, ANSI Z88.2, or MSHA 30 CFR 72.710 (where applicable). Use an air-supplied or air-purifying cartridge if the action level is exceeded. Ensure that the respirator has the appropriate protection factor for the exposure level. If cartridge type respirators are used, the cartridge must be appropriate for the chemical exposure. For emergencies or instances with unknown exposure levels, use a self-contained breathing apparatus (SCBA)

Self contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmospheres.

Thermal hazard protection : Wear cold insulating gloves when transfilling or breaking transfer connections. Standard EN 511 - Cold insulating gloves.

## SECTION 9: Physical and chemical properties

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

Physical state : Gas  
Colour : Colourless

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Odour	: No data available
Odour threshold	: No data available
pH	: Not applicable.
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: Not applicable.
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: Not applicable.
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Water: No data available
Log Pow	: Not applicable.
Log Kow	: Not applicable.
Viscosity, kinematic	: Not applicable.
Viscosity, dynamic	: Not applicable.
Explosive properties	: Not applicable.
Oxidizing properties	: None.
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

None.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

#### CD - Carbon monoxide 1% - 9.3%

Additional information	Low concentrations of CO2 cause increased respiration and headache
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#### Carbon monoxide (630-08-0)

LC50 inhalation rat (ppm)	3760 ppm/1h
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<b>Carbon monoxide (630-08-0)</b>	
ATE US (gases)	1880.000 ppmv/4h

Skin corrosion/irritation	: Not classified
	pH: Not applicable.
Serious eye damage/irritation	: Not classified
	pH: Not applicable.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: May damage fertility or the unborn child.
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

### 12.2. Persistence and degradability

<b>CD - Carbon monoxide 1% - 9.3%</b>	
Persistence and degradability	No ecological damage caused by this product.

<b>Carbon dioxide (124-38-9)</b>	
Persistence and degradability	No ecological damage caused by this product.

### 12.3. Bioaccumulative potential

<b>CD - Carbon monoxide 1% - 9.3%</b>	
Log Pow	Not applicable.
Log Kow	Not applicable.
Bioaccumulative potential	No ecological damage caused by this product.

<b>Carbon monoxide (630-08-0)</b>	
Log Kow	Not applicable.

<b>Carbon dioxide (124-38-9)</b>	
BCF fish 1	(no bioaccumulation)
Log Pow	0.83
Log Kow	Not applicable.
Bioaccumulative potential	No ecological damage caused by this product.

### 12.4. Mobility in soil

<b>CD - Carbon monoxide 1% - 9.3%</b>	
Mobility in soil	No data available.

<b>Carbon monoxide (630-08-0)</b>	
Mobility in soil	No data available.

<b>Carbon dioxide (124-38-9)</b>	
Mobility in soil	No data available.
Ecology - soil	No ecological damage caused by this product.

### 12.5. Other adverse effects

Effect on the ozone layer : None

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

Waste disposal recommendations : Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

**SECTION 14: Transport information**

In accordance with DOT

Transport document description : UN3163 Liquefied gas, n.o.s., 2.2  
 UN-No.(DOT) : UN3163  
 Proper Shipping Name (DOT) : Liquefied gas, n.o.s.  
 Class (DOT) : 2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115  
 Hazard labels (DOT) : 2.2 - Non-flammable gas



DOT Symbols : G - Identifies proper shipping name (PSN) requiring the addition of technical name(s) in parentheses following the PSN  
 DOT Special Provisions (49 CFR 172.102) : T50 - When portable tank instruction T50 is referenced in Column (7) of the 172.101 Table, the applicable liquefied compressed gases are authorized to be transported in portable tanks in accordance with the requirements of 173.313 of this subchapter

**Additional information**

Other information : No supplementary information available.  
 Special transport precautions : 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 there is adequate ventilation. - Ensure that containers are firmly secured. - Ensure cylinder valve is closed and not leaking. - Ensure valve outlet cap nut or plug (where provided) is correctly fitted. - Ensure valve protection device (where provided) is correctly fitted.

**Transport by sea**

UN-No. (IMDG) : 3163  
 Proper Shipping Name (IMDG) : LIQUEFIED GAS, N.O.S.  
 Class (IMDG) : 2.2 - Non-flammable, non-toxic gases

**Air transport**

UN-No. (IATA) : 3163  
 Proper Shipping Name (IATA) : LIQUEFIED GAS, N.O.S.  
 Class (IATA) : 2

**SECTION 15: Regulatory information**

**15.1. US Federal regulations**

No additional information available

**15.2. International regulations**

**CANADA**

**Carbon monoxide (630-08-0)**

Listed on the Canadian DSL (Domestic Substances List)

**Carbon dioxide (124-38-9)**

Listed on the Canadian DSL (Domestic Substances List)

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### EU-Regulations

#### 15.2.2. National regulations

No additional information available

#### 15.3. US State regulations

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U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No

Carbon monoxide (630-08-0)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	Yes	No	No	

Carbon dioxide (124-38-9)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	No	No	No	

Carbon monoxide (630-08-0)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List

Carbon dioxide (124-38-9)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

## SECTION 16: Other information

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#### Other information

: When you mix two or more chemicals, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist or other trained person when you evaluate the end product. Before using any plastics, confirm their compatibility with this product

Praxair asks users of this product to study this SDS and become aware of the product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this SDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information

The opinions expressed herein are those of qualified experts within Praxair, Inc. We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and the conditions of use are not within the control of Praxair, Inc, it is the user's obligation to determine the conditions of safe use of the product

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SDS US (GHS HazCom 2012) - PDI

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