



MATERIAL SAFETY DATA SHEET - CALIBRATION CHECK GAS

PRODUCT NAME: CARBON DIOXIDE (1 PPM – 35%) IN NITROGEN

MSDS NO: 34

Version:3

Date: January, 2006

1. Chemical Product and Company Identification

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PRODUCT NAME: CARBON DIOXIDE (1 PPM – 35%) IN NITROGEN
CHEMICAL NAME: Carbon Dioxide in nitrogen
COMMON NAMES/ SYNONYMS: None
TDG (Canada) CLASSIFICATION: 2.2
WHIMIS CLASSIFICATION: A

2. COMPOSITION/ INFORMATION ON INGREDIENTS

Table with 5 columns: INGREDIENT, %VOLUME, PEL-OSHA, TLV-ACGIH, LD50 or LC50 Route/Species. Rows include Carbon Dioxide and Nitrogen.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Carbon dioxide exposure can cause nausea and respiratory problems. High concentrations may cause vasodilatation leading to circulatory collapse.

ROUTE OF ENTRY:

Table with 5 columns: Skin Contact, Skin Absorption, Eye Contact, Inhalation, Ingestion. Rows show 'No' for Skin Contact, Skin Absorption, Eye Contact, Ingestion and 'Yes' for Inhalation.

HEALTH EFFECTS:

Table with 5 columns: Exposure Limits, Irritant, Sensitization, Reproductive Hazard, Mutagen. Rows show 'Yes' for Exposure Limits and 'No' for Irritant, Sensitization, Reproductive Hazard, Mutagen.

Carcinogenicity: --NTP: No IARC: No OSHA: No

EYE EFFECTS:

N/A



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**SKIN EFFECTS:**

N/A

**INGESTION EFFECTS:**

Ingestion unlikely. Gas at room temperature.

**INHALATION EFFECTS:**

Carbon dioxide is the most powerful cerebral vasodilator known. Inhaling large concentrations causes rapid circulatory insufficiency leading to coma and death. Asphyxiation is likely to occur before the effects of carbon dioxide overexposure. Chronic, harmful effects are not known from repeated inhalation of low concentrations. Low concentrations of carbon dioxide cause increased respiration and headache.

Effects of oxygen deficiency resulting from simple asphyxiation may include: rapid breathing, diminished mental alertness, impaired muscular coordination, faulty judgement, depression of all sensations, emotional instability, and fatigue. As asphyxiation progresses, nausea, vomiting, prostration, and loss of consciousness may result, eventually leading to convulsions, coma, and death.

**NFPA HAZARD CODES**

Health: 1  
Flammability: 0  
Reactivity: 0

**HMIS HAZARD CODES**

Health: 1  
Flammability: 0  
Reactivity: 0

**RATING SYSTEM**

0= No Hazard  
1= Slight Hazard  
2= Moderate Hazard  
3= Serious Hazard  
4= Severe Hazard

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### 4. FIRST AID MEASURES

**EYES:**

N/A

**SKIN:**

N/A

**INGESTION:**

Not required

**INHALATION:**

PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH THE SELF-CONTAINED BREATHING APPARATUS. Victims should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. If breathing has stopped administer artificial resuscitation and supplemental oxygen. Further treatment should be symptomatic and supportive.

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### 5. FIRE-FIGHTING MEASURES

These containers hold gas under pressure, with no liquid phase. If involved in a major fire, they should be sprayed with water to avoid pressure increases, otherwise pressures will rise and ultimately they may distort or burst to release the contents. The gases will not add significantly to the fire, but containers or fragments may be projected considerable distances - thereby hampering fire fighting efforts.

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### 6. ACCIDENTAL RELEASE MEASURES

In terms of weight, these containers hold very little contents, such that any accidental release by puncturing etc. will be of no practical concern.

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### 7. HANDLING AND STORAGE

Suck back of water into the container must be prevented. Do not allow backfeed into the container. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Use only in well-ventilated areas. Do not heat cylinder by any means to increase rate of product from the cylinder. Do not allow the temperature where cylinders are stored to exceed 130°F (54°C).

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Use adequate ventilation for extended use of gas.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

PARAMETER:	VALUE:
Physical state	: Gas
Evaporation point	: N/A
pH	: N/A
Odor and appearance	: Colorless, odorless gas

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### 10. STABILITY AND REACTIVITY

Stable under normal conditions. Expected shelf life 24 months.

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### 11. TOXICOLOGICAL INFORMATION

Carbon dioxide is the most powerful cerebral vasodilator known. Inhaling large concentrations causes rapid circulatory insufficiency leading to coma and death. Chronic, harmful effects are not known from repeated inhalation of low (3 to 5 molar %) concentrations.

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### 12. ECOLOGICAL INFORMATION

No ecological damage caused by this product.

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### 13. DISPOSAL INFORMATION

Do not discharge into any place where its accumulation could be dangerous. Used containers are acceptable for disposal in the normal waste stream as long as the cylinder is empty and valve removed or cylinder wall is punctured; but GASCO encourages the consumer to return cylinders.

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### 14. TRANSPORT INFORMATION

	<u>United States DOT</u>	<u>Canada TDG</u>
PROPER SHIPPING NAME:	Compressed Gas N.O.S. (Carbon Dioxide in Nitrogen)	Compressed Gas N.O.S. (Carbon Dioxide in Nitrogen)
HAZARD CLASS:	2.2	2.2
IDENTIFICATION NUMBER:	UN1956	UN1956
SHIPPING LABEL:	NONFLAMMABLE GAS	NONFLAMMABLE GAS

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### 15. REGULATORY INFORMATION

Classified non-flammable/non-toxic according to Directives 88/379/EEC, 67/548/EEC and the UK's CHIP 96 Regulations.

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### 16. OTHER INFORMATION

This MSDS has been prepared in accordance with the Chemicals (Hazard Information and Packaging for Supply (Amendment) Regulation 1996. The information is based on the best knowledge of GASCO, and its advisors and is given in good faith, but we cannot guarantee its accuracy, reliability or completeness and therefore disclaim any liability for loss or damage arising out of use of this data. Since conditions of use are outside the control of the Company and its advisors we disclaim any liability for loss or damage when the product is used for other purposes than it is intended.

MSDS/S010/34/January, 2006