



MATERIAL SAFETY DATA SHEET - CALIBRATION CHECK GAS

**PRODUCT NAME: CARBON MONOXIDE (0.0005- 1.0%), OXYGEN (0.0015- 23.5%),
BALANCE NITROGEN**

MSDS NO: 374

Version:1

Date: March, 2012

1. Chemical Product and Company Identification

Gasco Affiliates, LLC
320 Scarlett Blvd.
Oldsmar, FL 34677

TELEPHONE NUMBER: (800) 910-0051

24-HOUR EMERGENCY NUMBER: 1-800-424-9300

FAX NUMBER: (866) 755-8920

E-MAIL: info@gascogas.com

PRODUCT NAME: MULTI-MIX

CHEMICAL NAME: Carbon Monoxide, Oxygen in Nitrogen

COMMON NAMES/ SYNONYMS: None

TDG (Canada) CLASSIFICATION: 2.2

WHIMIS CLASSIFICATION: A

2. COMPOSITION/ INFORMATION ON INGREDIENTS

INGREDIENT	%VOLUME	PEL-OSHA	TLV-ACGIH	LD ₅₀ or LC ₅₀ Route/Species
Carbon Monoxide FORMULA: CO	0.0005 to 1.0%	50 ppm	25 ppm	1811 ppm/ 4 hours (rat)
Oxygen FORMULA: O ₂	0.0015 to 23.5%	N/A	N/A	N/A
Nitrogen FORMULA: N ₂	Balance	Simple Asphyxiate	Simple Asphyxiate	N/A

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

This product is a colorless, odorless gas. Carbon Monoxide is a chemical asphyxiant and can produce significant, adverse health effects at relatively low concentrations. Over-exposure to Carbon Monoxide can cause nausea, dizziness, headaches, and collapse. Additionally, releases of this product may produce oxygen-deficient atmospheres; individuals in such atmospheres may be asphyxiated.

ROUTE OF ENTRY:

Skin Contact
No

Skin Absorption
No

Eye Contact
No

Inhalation
Yes

Ingestion
No

HEALTH EFFECTS:

Exposure Limits
Yes

Irritant
No

Sensitization
No

Reproductive Hazard
Yes

Mutagen
Yes

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:

Due to the small size of this cylinder, no unusual health effects from over-exposure are anticipated under routine circumstances of use. Inhaled carbon monoxide binds with blood hemoglobin to form carboxyhemoglobin. Carboxyhemoglobin can not take part in normal oxygen transport, greatly reducing the blood's ability to transport oxygen. Depending on levels and duration of exposure, symptoms may include headache, dizziness, heart palpitations, weakness, confusion, nausea, and even convulsions, eventual unconsciousness and death.

NFPA HAZARD CODES

Health: 2
Flammability: 0
Reactivity: 0

HMIS HAZARD CODES

Health: 2
Flammability: 0
Reactivity: 0

RATING SYSTEM

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

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 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.

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.

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.

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



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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).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Use adequate ventilation for extended use of gas.

9. PHYSICAL AND CHEMICAL PROPERTIES

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

10. STABILITY AND REACTIVITY

Stable under normal conditions. Expected shelf life 48 months.

11. TOXICOLOGICAL INFORMATION

Due to the small size of the cylinder no toxicological damage is anticipated.

12. ECOLOGICAL INFORMATION

Due to the small size of the cylinder no ecological damage caused by this product.

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.

14. TRANSPORT INFORMATION

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



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15. REGULATORY INFORMATION

The components of this product are listed under the accident prevention provisions of section 112(r) of the Clean Air Act (CAA) with a threshold quantity (TQ) of 10,000 pounds each.

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/S010/374/ March, 2012