

# MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS Standards

## 1. PRODUCT IDENTIFICATION

**CHEMICAL NAME; CLASS: OXIDIZING GAS MIXTURE**

**Containing the Following Component in a Nitrogen Balance Gas:**

**Oxygen: 23.5-50.0%**

**SYNONYMS:** Not Applicable

**CHEMICAL FAMILY NAME:** Not Applicable

**FORMULA:** Not Applicable

**Document Number:** 50014

**Note:** The Material Safety Data Sheet is for this gas mixture supplied in cylinders with 33 cubic feet (935 liters) or less gas capacity (DOT - 39 cylinders). This MSDS has been developed for various gas mixtures with the composition of components within the ranges listed in Section 2 (Composition and Information on Ingredients). Refer to the product label for information on the actual composition of the product.

<b>PRODUCT USE:</b>	Calibration of Monitoring and Research Equipment
<b>SUPPLIER/MANUFACTURER'S NAME:</b>	CALGAZ
<b>ADDRESS:</b>	821 Chesapeake Drive Cambridge, MD 21613
<b>EMERGENCY PHONE:</b>	CHEMTREC: 1-800-424-9300
<b>BUSINESS PHONE:</b>	1-410-228-6400
	General MSDS Information 1-713/868-0440
	Fax on Demand: 1-800/231-1366

## 2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	mole %	EXPOSURE LIMITS IN AIR					
			ACGIH-TLV		OSH-PEL		NIOSH IDLH ppm	OTHER ppm
			TWA ppm	STEL ppm	TWA ppm	STEL ppm		
Oxygen	7782-44-7	23.5-50.0%	There are no specific exposure limits for Oxygen. Oxygen levels should be maintained above 19.5%.					
Nitrogen	7727-37-9	Balance	There are no specific exposure limits for Nitrogen. Nitrogen is a simple asphyxiant (SA). Oxygen levels should be maintained above 19.5%.					

NE = Not Established.

See Section 16 for Definitions of Terms Used.

NOTE (1): ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-1998 format. This gas mixture has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

## 3. HAZARD IDENTIFICATION

**EMERGENCY OVERVIEW:** This gas mixture is a colorless, odorless, oxidizing gas. The main hazard associated with a release of this gas mixture is related to the powerful oxidizing power of the Oxygen component of this gas mixture. In high oxygen content atmospheres, common combustible materials can become highly flammable. Emergency responders must practice extreme caution when approaching releases because of the fire potential.

**SYMPTOMS OF OVER-EXPOSURE BY ROUTE OF EXPOSURE:** The most significant route of over-exposure for this gas mixture is by inhalation.

**INHALATION:** Due to the small size of an individual cylinder of this gas mixture, no unusual health effects from exposure to the product are anticipated under routine circumstances of use. If this gas mixture is released in a small, poorly ventilated area (i.e. an enclosed or confined space), high concentrations of this gas can cause an oxygen-rich environment. Exposure to an oxygen-rich environment is only known to cause adverse health effects when the duration of exposure is in excess of 17 hours. An exposure of this duration is extremely unlikely from use of this gas mixture due to the small overall cylinder size and content.

**HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in Lay Terms.**

Over-exposure to Oxygen may cause the following health effects:

**ACUTE:** Due to the small size of the individual cylinder of this gas mixture, no unusual health effects from exposure to the product are anticipated under routine circumstances of use.

**CHRONIC:** There are currently no known adverse health effects associated with chronic exposure to this gas.

**TARGET ORGANS:** Not applicable.

### HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HEALTH HAZARD (BLUE) 0

FLAMMABILITY HAZARD (RED) 0

PHYSICAL HAZARD (YELLOW) 0

### PROTECTIVE EQUIPMENT

EYES RESPIRATORY HANDS BODY

See Section 8

For Routine Industrial Use and Handling Applications

## 4. FIRST-AID MEASURES

No unusual health effects are anticipated after exposure to this gas mixture, due to the small cylinder size. Supplemental oxygen is not normally appropriate.

Victim(s) who experience any adverse effect after over-exposure to this gas mixture must be taken for medical attention. Physicians should be advised of the victim's exposure to an oxygen-rich environment. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to physician or other health professional with victim(s).

## 5. FIRE-FIGHTING MEASURES

**FLASH POINT:** Not applicable.

**AUTOIGNITION TEMPERATURE:** Not applicable.

**FLAMMABLE LIMITS (in air by volume, %):**

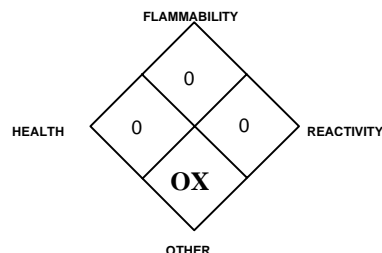
Lower (LEL): Not applicable.

Upper (UEL): Not applicable.

**FIRE EXTINGUISHING MATERIALS:** Non-flammable gas. Use extinguishing media appropriate for surrounding fire.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** This gas mixture does not burn; however, cylinders, when involved in fire, may rupture or burst in the heat of the fire. Oxygen, a component of this gas mixture, will support and accelerate combustion. Common combustible materials will burn more readily in elevated oxygen environments, and some materials which are non-combustible in air will burn in an oxygen-enriched atmosphere. Direct water onto cylinders to keep cool. Shut-off the flow of oxygen or move cylinders from fire area if it can be done safely. Rescue personnel should be aware of the extreme fire hazards associated with oxygen-enriched atmospheres.

### NFPA RATING



## 5. FIRE-FIGHTING MEASURES

**Explosion Sensitivity to Mechanical Impact:** Not sensitive.

**Explosion Sensitivity to Static Discharge:** Not sensitive.

**SPECIAL FIRE-FIGHTING PROCEDURES:** Structural fire-fighters must wear Self-Contained Breathing Apparatus and full protective equipment. Other information for pre-planning can be found in the North American Emergency Response Guidebook.

## 6. ACCIDENTAL RELEASE MEASURES

**LEAK RESPONSE:** Due to the small size and content of the cylinder, an accidental release of this gas mixture presents significantly less risk associated with an oxygen-enriched atmosphere, as well as other safety hazards, than a similar release from a larger cylinder. However, as with any chemical release, extreme caution must be used during emergency response procedures. In the event of a release in which the atmosphere is unknown, and in which other chemicals are potentially involved, evacuate immediate area. Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a leak, clear the affected area, protect people, and respond with trained personnel. Adequate fire protection must be provided.

In general, if this gas mixture is released in a small, poorly ventilated area, carefully monitor oxygen levels. **DO NOT ENTER THE AREA IF THE OXYGEN CONTENT EXCEEDS 23.5%. USE VENTILATION TO REDUCE THE OXYGEN LEVELS.** Allow the gas, which is lighter than air to dissipate. If necessary, monitor the surrounding area (and the original area of the release) for oxygen. Oxygen levels must be between 19.5% and 23.5% before non-emergency response personnel are permitted into the area.

If leaking incidentally from the cylinder contact your supplier.

## 7. HANDLING and USE

**STORAGE AND HANDLING PRACTICES:** Cylinders should be firmly secured to prevent falling or being knocked-over. Cylinders must be protected from the environment, and preferably kept at room temperature approximately 21°C (70°F). Cylinders should be stored in dry, well-ventilated areas away from sources of heat, ignition and direct sunlight. Protect cylinders against physical damage. Store containers away from heavily trafficked areas and emergency exits. Store away from process and production areas, away from elevators, building and room exits or main aisles leading to exits.

Consider installation of leak detection and alarm for storage and use areas. Have appropriate extinguishing equipment in the storage area (i.e. sprinkler system, portable fire extinguishers).

Full and empty cylinders should be segregated. Use a first-in, first-out inventory system to prevent full containers from being stored for long periods of time. These cylinders are not refillable. **WARNING! Do not refill DOT 39 cylinders. To do so may cause personal injury or property damage.**

**SPECIAL PRECAUTIONS FOR HANDLING GAS CYLINDERS: WARNING!** Compressed gases can present significant safety hazards. During cylinder use, use equipment designed for these specific cylinders. Ensure all lines and equipment are rated for proper service pressure.

**PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT:** Follow practices indicated in Section 6 (Accidental Release Measures). Make certain application equipment is locked and tagged-out safely. Purge gas handling equipment with inert gas (i.e. nitrogen) before attempting repairs. Always use product in areas where adequate ventilation is provided.

## 8. EXPOSURE CONTROLS - PERSONAL PROTECTION

**VENTILATION AND ENGINEERING CONTROLS:** No special ventilation systems or engineering controls are needed under normal circumstances of use. As with all chemicals, use this gas mixture in well-ventilated areas.

**RESPIRATORY PROTECTION:** No special respiratory protection is required under normal circumstances of use. **DO NOT ENTER AN AREA IF THE OXYGEN CONTENT EXCEEDS 23.5%.**

**EYE PROTECTION:** Safety glasses. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

**HAND PROTECTION:** No special protection is needed under normal circumstances of use. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

**BODY PROTECTION:** No special protection is needed under normal circumstances of use. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

## 9. PHYSICAL and CHEMICAL PROPERTIES

The following information is for Nitrogen, the main component of this gas mixture.

**GAS DENSITY @ 32°F (0°C) and 1 atm:** 0.072 lbs/ ft<sup>3</sup> (1.153 kg/m<sup>3</sup>)

**FREEZING/MELTING POINT @ 10 psig:** -210°C (-345.8°F)

**SPECIFIC GRAVITY (air = 1) @ 70°F (21.1°C):** 0.906

**SOLUBILITY IN WATER vol/vol @ 32°F (0°C) and 1 atm:** 0.023

**EVAPORATION RATE (nBuAc = 1):** Not applicable.

**ODOR THRESHOLD:** Not applicable.

**VAPOR PRESSURE @ 70°F (21.1°C) psig:** Not applicable.

**COEFFICIENT WATER/OIL DISTRIBUTION:** Not applicable.

The following information is for Oxygen, a main component of this gas mixture.

**GAS DENSITY @ 32°F (0°C) and 1 atm:** 0.083 lb/cu ft (1.326 kg/m<sup>3</sup>)

**FREEZING/MELTING POINT @ 10 psig:** -361.8°F (-218.8°C)

**SPECIFIC GRAVITY (air = 1) @ 70°F (21.1°C):** 1.105

**SOLUBILITY IN WATER vol/vol @ 32°F (0°C) and 1 atm:** 0.04.91

**EVAPORATION RATE (nBuAc = 1):** Not applicable.

**ODOR THRESHOLD:** Not applicable.

**VAPOR PRESSURE @ 70°F (21.1°C) psig:** Not applicable.

**COEFFICIENT WATER/OIL DISTRIBUTION:** Not applicable.

The following information is for the gas mixture.

**APPEARANCE AND COLOR:** This gas mixture is a colorless, odorless gas.

**HOW TO DETECT THIS SUBSTANCE (warning properties):** There are no unusual warning properties associated with a release of this gas mixture.

**BOILING POINT:** -195.8°C (-320.4°F)

**pH:** Not applicable.

**MOLECULAR WEIGHT:** 28.01

**EXPANSION RATIO:** Not applicable.

**SPECIFIC VOLUME (ft<sup>3</sup>/lb):** 13.8

**BOILING POINT:** -297.4°F (-183.0°C)

**pH:** Not applicable.

**MOLECULAR WEIGHT:** 32.00

**EXPANSION RATIO:** Not applicable.

**VOLUME (ft<sup>3</sup>/lb):** 12.1

## 10. STABILITY and REACTIVITY

**STABILITY:** Normally stable in gaseous state.

**DECOMPOSITION PRODUCTS:** The components of this gas mixture do not decompose, per se, but can react with other compounds in the heat of a fire.

**MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE:** Oxygen, a component of this gas mixture, is incompatible with combustible and flammable materials, chlorinated hydrocarbons, hydrazine, reduced boron compounds, ethers, phosphine, phosphorous tribromide, phosphorous trioxide, tetrafluorethylene, and compounds which readily form peroxides. Oxygen may form explosive compounds when exposed to combustible material, or oil, grease, and other hydrocarbon materials.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**CONDITIONS TO AVOID:** Contact with incompatible materials. Cylinders exposed to high temperatures or direct flame can rupture or burst.

## 11. TOXICOLOGICAL INFORMATION

**TOXICITY DATA:** The following toxicology data are available for the components of this gas mixture:

**OXYGEN:** Oxygen is the vital element in the atmosphere in which we live and breathe. The atmosphere contains approximately 21% oxygen. Breathing higher concentrations could lead to oxygen toxicity and pneumonia. Breathing lower oxygen concentrations could lead to hypoxia. The following toxicity data are for oxygen:

**NITROGEN:** There are no specific toxicology data for Nitrogen. Nitrogen is a simple asphyxiant, which acts to displace oxygen in the environment.

## 11. TOXICOLOGICAL INFORMATION(continued)

**SUSPECTED CANCER AGENT:** The components of this gas mixture are not found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, and IARC; therefore, they are not considered to be, nor suspected to be, cancer-causing agents by these agencies.

**IRRITANCY OF PRODUCT:** This gas mixture is not irritating; however, contact with rapidly expanding gases can cause frostbite to exposed tissue.

**SENSITIZATION TO THE PRODUCT:** The components of this gas mixture are not known to cause sensitization after prolonged or repeated exposures.

**REPRODUCTIVE TOXICITY INFORMATION:** Listed below is information concerning the effects of this gas mixture and its components on the human reproductive system.

**Mutagenicity:** No mutagenicity effects have been described for the components of this gas mixture. Mutation data have been reported for the Oxygen component of this gas mixture, obtained during clinical studies to specific animal tissues exposed to high concentrations.

**Embryotoxicity:** No embryotoxic effects have been described for the components of this gas mixture.

**Teratogenicity:** Human teratogenic effects by inhalation have been reported for the Oxygen component of this gas mixture, with developmental abnormalities of the fetal cardiovascular system; however, these data are from exposures in a hyperbaric environment and so are relevant to industrial exposure.

**Reproductive Toxicity:** No reproductive toxicity effects have been described for components of this gas mixture.

A **mutagen** is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generation lines. An **embryotoxin** is a chemical which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A **teratogen** is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A **reproductive toxin** is any substance which interferes in any way with the reproductive process.

**BIOLOGICAL EXPOSURE INDICES (BEIs):** Currently, Biological Exposure Indices (BEIs) have not been determined for the components of this gas mixture.

## 12. ECOLOGICAL INFORMATION

**ENVIRONMENTAL STABILITY:** The components of this gas mixture occur naturally in the atmosphere. The gas will be dissipated rapidly in well-ventilated areas. The following environmental data are applicable to the components of this gas mixture.

**OXYGEN:** Water Solubility = 1 volume Oxygen/32 volumes water at 20°C. Log  $K_{ow}$  = -0.65

**NITROGEN:** Water Solubility = 2.4 volumes Nitrogen/100 volumes water at 0°C. 1.6 volumes Nitrogen/100 volumes water at 20°C.

**EFFECT OF MATERIAL ON PLANTS or ANIMALS:** Due to the small cylinder size, no adverse effect on animals or plants is anticipated if one cylinder of this gas mixture is released.

**EFFECT OF CHEMICAL ON AQUATIC LIFE:** No evidence is currently available on this gas mixture's effects on aquatic life.

## 13. DISPOSAL CONSIDERATIONS

**PREPARING WASTES FOR DISPOSAL PREPARING WASTES FOR DISPOSAL:** Waste disposal must be in accordance with appropriate Federal, State, and local regulations. Cylinders with undesired residual product may be safely vented outdoors with the proper regulator. For further information, refer to Section 16 (Other Information).

## 14. TRANSPORTATION INFORMATION

**THIS MATERIAL IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.**

**PROPER SHIPPING NAME:** Compressed gases, oxidizing, n.o.s. (Oxygen, Nitrogen)

**HAZARD CLASS NUMBER and DESCRIPTION:** 2.2 (Non-Flammable Gas); 5.1 (Oxidizer)

**UN IDENTIFICATION NUMBER:** UN 3156

**PACKING GROUP:** Not Applicable

**DOT LABEL(S) REQUIRED:** Class 2.2 (Non-Flammable Gas), Class 5.1 (Oxidizer)

**NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2000):** 128

**MARINE POLLUTANT:** The components of this gas mixture are not classified by the DOT as Marine Pollutants (as defined by 49 CFR 172.101, Appendix B).

**SPECIAL SHIPPING INFORMATION:** Cylinders should be transported in a secure position, in a well-ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious safety hazards. If transporting these cylinders in vehicles, ensure these cylinders are not exposed to extremely high temperatures (as may occur in an enclosed vehicle on a hot day). Additionally, the vehicle should be well-ventilated during transportation.

**Note:** DOT 39 Cylinders ship in a strong outer carton (overpack). Pertinent shipping information goes on the outside of the overpack. DOT 39 Cylinders do not have transportation information on the cylinder itself.

**TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:** This gas is considered as Dangerous Goods, per regulations of Transport Canada.

**PROPER SHIPPING NAME:** Compressed gases, oxidizing, n.o.s. (Oxygen, Nitrogen)

**HAZARD CLASS NUMBER and DESCRIPTION:** 2.2 (Non-Flammable Gas), 5.1 (Oxidizer)

**UN IDENTIFICATION NUMBER:** UN 3156

**PACKING GROUP:** Not Applicable

**HAZARD LABEL:** Class 2.2 (Non-Flammable Gas), Class 5.1 (Oxidizer)

**SPECIAL PROVISIONS:** 16

**EXPLOSIVE LIMIT AND LIMITED QUANTITY INDEX:** 0

**ERAP INDEX:** 3000

**PASSENGER CARRYING SHIP INDEX:** Forbidden

**PASSENGER CARRYING ROAD VEHICLE OR PASSENGER CARRYING RAILWAY VEHICLE INDEX:** 75

**NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2000):** 128

**NOTE:** Shipment of compressed gas cylinders via Public Passenger Road Vehicle is a violation of Canadian law (Transport Canada Transportation of Dangerous Goods Act, 1992).

## 15. REGULATORY INFORMATION

**ADDITIONAL U.S. REGULATIONS:**

**U.S. SARA REPORTING REQUIREMENTS:** This gas is not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act., as follows:

**U.S. SARA THRESHOLD PLANNING QUANTITY:** There are no specific Threshold Planning Quantities for this gas. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

**U.S. TSCA INVENTORY STATUS:** The components of this gas mixture are listed on the TSCA Inventory.

**OTHER U.S. FEDERAL REGULATIONS:**

- The components of this gas mixture are not subject to the requirements of CFR 29 1910.1000.
- The regulations of the Process Safety Management of Highly Hazardous Chemicals (29 CFR 1910.119) are not applicable to this gas mixture.
- No component of this gas mixture is subject to the reporting requirements of Section 112(r) of the Clean Air Act.
- This gas mixture does not contain any Class I or Class II ozone depleting chemicals (40 CFR part 82).
- Nitrogen and Oxygen are not listed as Regulated Substances, per 40 CFR, Part 68, of the Risk Management for Chemical Releases.

**U.S. STATE REGULATORY INFORMATION:** The components of this gas mixture are covered under the following specific State regulations:

Alaska - Designated Toxic and Hazardous Substances: No.

California - Permissible Exposure Limits for Chemical Contaminants: Nitrogen.

Florida - Substance List: Oxygen.

Illinois - Toxic Substance List: No.

Kansas - Section 302/313 List: No.

Massachusetts - Substance List: Oxygen.

Michigan - Critical Materials Register: No.

Minnesota - List of Hazardous Substances: No.

Missouri - Employer Information/Toxic Substance List: No.

New Jersey - Right to Know Hazardous Substance List: Oxygen, Nitrogen.

North Dakota - List of Hazardous Chemicals, Reportable Quantities: No.

Pennsylvania - Hazardous Substance List: Oxygen, Nitrogen.

Rhode Island - Hazardous Substance List: Oxygen, Nitrogen.

Texas - Hazardous Substance List: No.

West Virginia - Hazardous Substance List: No.

Wisconsin - Toxic and Hazardous Substances List: No.

**CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65):** The components of this gas mixture are not on the California Proposition 65 lists.

**ADDITIONAL CANADIAN REGULATIONS:**

**CANADIAN DSL/NDL INVENTORY STATUS:** The components of this gas mixture are on the Canadian DSL Inventory.

## 15. REGULATORY INFORMATION(continued)

**CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:** The components of this gas mixture are not on the CEPA Priorities Substances List.

**CANADIAN WHMIS CLASSIFICATION:** This gas mixture is categorized as a Controlled Product, Hazard Class A, as per the Controlled Product Regulations.

## 16. OTHER INFORMATION

### INFORMATION ABOUT DOT-39 NRC (Non-Refillable Cylinder) PRODUCTS

DOT 39 cylinders ship as hazardous materials when full. Once the cylinders are relieved of pressure (empty) they are not considered hazardous material or waste. Residual gas in this type of cylinder is not an issue because toxic gas mixtures are prohibited. Calibration gas mixtures typically packaged in these cylinders are Nonflammable n.o.s., UN 1956. A small percentage of calibration gases packaged in DOT 39 cylinders are flammable or oxidizing gas mixtures.

For disposal of used DOT-39 cylinders, it is acceptable to place them in a landfill if local laws permit. Their disposal is no different than that employed with other DOT containers such as spray paint cans, household aerosols, or disposable cylinders of propane (for camping, torch etc.). When feasible, we recommended recycling for scrap metal content. CALGAZ will do this for any customer that wishes to return cylinders to us prepaid. All that is required is a phone call to make arrangements so we may anticipate arrival. Scrapping cylinders involves some preparation before the metal dealer may accept them. We perform this operation as a service to valued customers who want to participate.

**MIXTURES:** When two or more gases or liquefied gases are mixed, their hazardous properties may combine to 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 make your safety evaluation of the end product. Remember, gases and liquids have properties which can cause serious injury or death.

Further information about the handling of compressed gases can be found in the following pamphlets published by: Compressed Gas Association Inc. (CGA), 1725 Jefferson Davis Highway, Suite 1004, Arlington, VA 22202-4102. Telephone: (703) 412-0900.

P-1            *"Safe Handling of Compressed Gases in Containers"*  
AV-1         *"Safe Handling and Storage of Compressed Gases"*  
                 *"Handbook of Compressed Gases"*

**PREPARED BY:**                    CHEMICAL SAFETY ASSOCIATES, Inc.  
   PO Box 3519, La Mesa, CA 91944-3519  
   619/670-0609  
   Fax on Demand:    1-800/231-1366



This Material Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this gas mixture. To the best of CALGAZ knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this gas mixture is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.