

MATERIAL SAFETY DATA SHEET
29 CFR 1910.1200 OSHA Hazard
Communication Rule Format
Chem-Tel 24 Hour Emergency # 1-800-255-3924

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This product contains carbon dioxide, oxygen and nitrogen, substances subject to the Pennsylvania Worker and Community Right-To-Know Act.

PRODUCT IDENTITY

LABEL IDENTITY - MSA P/N 479265 Calibration Check Gas, 2.5% Carbon Dioxide in Air
CHEMICAL NAME - Carbon Dioxide, Oxygen, Nitrogen Mixture
ADDITIONAL IDENTITIES - MSA P/N 479265 Calibration Gas
FORMULA - $\text{CO}_2 + \text{Nitrogen} + \text{Oxygen}$

APPLICABLE CHEMICAL CONTENTS

	<u>%</u>	<u>TWA</u>	<u>OSHA:PEL</u>
Carbon Dioxide (CAS 124-38-9)	2.5	0.5%*	0.5%
Air	Balance	None	

*STEL for Carbon dioxide is 30,000 ppm (ACGIH 2011)

NOTE: Gas under pressure, 1000 PSIG at 70°F, Approx. 103 liters of gas at atmospheric pressure.

PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR - Colorless, odorless gas

Following information is for Nitrogen the main component of this gas mixture

BOILING POINT - -320.4°F (-195.8 °C) SPECIFIC GRAVITY (air = 1) @70°F (21.1 °C): 0.906

VAPOR PRESSURE @70°F (21.1 °C): N/A* PERCENT VOLATILE BY VOLUME - N/A*

GAS DENSITY @32°F (0 °C) and 1 atm: 0.072 lbs/ft³ (1.153 kg/ m³)

SOLUBILITY IN WATER - Carbon Dioxide - 179 cm³/100 ml (0°C)
Oxygen - 3.2 cm³/100 ml (25°C)
Nitrogen - 2.3 cm³/100 ml (0°C)

N/A - Not Applicable

PHYSICAL HAZARD INFORMATION

PHYSICAL HAZARD - Compressed gas, 1000 PSIG at 70°F

CONDITIONS OR MATERIALS TO AVOID - Avoid caustic substances

FLASH POINT - N/A LEL - N/A UEL - N/A

EXTINGUISHING MEDIA - This gas mixture is not flammable..

SPECIAL FIRE FIGHTING PROCEDURES - See next item.

UNUSUAL FIRE AND EXPLOSION HAZARDS - Gas under pressure, 1000 PSIG at 70°F. Do not exceed 120°F.

HEALTH HAZARDS

HEALTH HAZARDS - Carbon Dioxide is an asphyxiant.

SIGNS AND SYMPTOMS OF EXPOSURE - N/A

PRIMARY ROUTES OF ENTRY - Inhalation

TARGET ORGANS - Lungs, skin, central nervous system

MEDICAL CONDITIONS GENERALLY RECOGNIZED AS BEING AGGRAVATED BY EXPOSURE - No Information

EXPOSURE LIMITS – ACGIH (2011) 5000 ppm. STEL 30,000 ppm CO₂ ; OSHA (2011) PEL 5,000ppm TWA.

CARCINOGENICITY DATA - NIOSH RTECS, OSHA, NTP or IARC does not list component gases.

EMERGENCY AND FIRST AID PROCEDURES - Remove from exposure. If breathing has stopped, give artificial respiration. Administer oxygen. Consult a physician immediately.

SAFE HANDLING AND USE

HYGIENIC PRACTICES - Avoid breathing gas

PROTECTIVE MEASURES DURING REPAIR AND MAINTENANCE OF CONTAMINATED EQUIPMENT - N/A

PROCEDURES FOR SPILL OR LEAK CLEANUP - Ventilate area.

WASTE DISPOSAL - Avoid breathing gas. Use in well-ventilated areas. Follow the calibration procedure detailed in the MSA instruction manual provided with the instrument under calibration.

STORAGE - Store in a cool, dry, well-ventilated area. Do not exceed 120°F.

CONTROL MEASURES

PERSONAL PROTECTIVE EQUIPMENT - Due to the limited amount of gas in the cylinder, and the low release rate employed in instrument calibration, respiratory protection is not indicated under conditions of intended use.

ENGINEERING CONTROLS - Mechanical ventilation is suitable.

WORK PRACTICES - Avoid breathing gas. Use in well-ventilated areas. Follow the calibration procedure detailed in the MSA instruction manual provided with the instrument under calibration.

DATE OF PREPARATION - Rev. 12, September 2011

WARNING: This is a hazardous chemical product. By following the directions and warnings provided with this product, the hazards associated with the use of this product can be greatly reduced but never entirely eliminated. Mine Safety Appliances Company makes no warranties, expressed or implied, with respect to this product and EXPRESSLY DISCLAIMS THE WARRANTY OF MERCHANTABILITY AND ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. Users assume all risks in handling, using or storing this product.