

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, methane and nitrogen, substances subject to the Pennsylvania Worker and Community Right-To-Know Act.

PRODUCT IDENTITY

LABEL IDENTITY - MSA P/N 801041 Calibration Check Gas, 1300 ppm Carbon Dioxide + 2.5% Methane in Nitrogen

CHEMICAL NAME - Carbon Dioxide, Methane, Nitrogen mixture

ADDITIONAL IDENTITIES - MSA P/N 801041 Calibration Gas

FORMULA - $\text{CO}_2 + \text{CH}_4$ in N_2

APPLICABLE CHEMICAL CONTENTS

	<u>%</u>	<u>TWA</u>	<u>STEL</u>
Carbon Dioxide (CAS 124-38-9) (ACGIH 2009)	0.13	5000 ppm	30,000 ppm
Methane (CAS 74-82-8)	2.5	1000 ppm**	
Nitrogen (CAS 7727-37-9)	Balance	None*	

* Nitrogen is an Asphyxiant

** Methane as an alkane (ACGIH 2009)

NOTE: Gas Under Pressure, 1000 PSIG at 70°F, Approx. 100 Liters 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)

Methane - 9 cm³/100 m. (20°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: Carbon Dioxide reacts with caustic materials

FLASH POINT - N/A

EXTINGUISHING MEDIA - This calibration 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, and Nitrogen are asphyxiants. Methane as an alkane (ACGIH 2009).

SIGNS AND SYMPTOMS OF EXPOSURE - Methane as an alkane CNS depression and cardiac sensitization. Significant dilution of ambient air by asphyxiants causes increased breathing frequency, drowsiness, weakness, and ringing in ears.

PRIMARY ROUTES OF ENTRY – Inhalation, eyes.

TARGET ORGANS – Lungs, CNS and heart.

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

EXPOSURE LIMITS - Carbon Dioxide 5000 ppm; STEL 30,000. Methane as an alkane 1000 ppm (ACGIH 2009).. Nitrogen - None.

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

EMERGENCY AND FIRST AID PROCEDURES - Remove From Exposure

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. Avoid Breathing Gas

WASTE DISPOSAL - Do not puncture or incinerate cylinder. Before discarding cylinder, slowly release contents to a safe exhaust. Dispose of cylinder in accordance with local, state and federal regulations

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. 8, July 2009.

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.