

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

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**PRODUCT IDENTITY**

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LABEL IDENTITY - MSA P/N 459942 Calibration Check Gas, 2.5% Methane in Air  
CHEMICAL NAME - Methane, Oxygen, Nitrogen Mixture  
ADDITIONAL IDENTITIES - MSA P/N 459942 Calibration Gas  
FORMULA -  $\text{CH}_4 + \text{O}_2 + \text{N}_2$

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**APPLICABLE CHEMICAL CONTENTS**

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	<u>%</u>	<u>TWA</u>
Methane (CAS 74-82-8)	2.5	NA*
Air	Balance	None

\*Methane as an asphyxiant (ACGIH 2013)

NOTE: Gas under pressure, 400 PSIG at 70°F, Approx. 27 liters gas at atmospheric pressure

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**PHYSICAL AND CHEMICAL PROPERTIES**

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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/ft<sup>3</sup> (1.153 kg/ m<sup>3</sup>)  
VAPOR DENSITY (AIR = 1) - Approx. 1  
SOLUBILITY IN WATER - Methane - 9 cm<sup>3</sup>/100 ml (20°C)  
Oxygen - 3.2 cm<sup>3</sup>/100 ml (25°C)  
Nitrogen - 2.3 cm<sup>3</sup>/100 ml (0°C)

N/A - Not Applicable

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**PHYSICAL HAZARD INFORMATION**

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PHYSICAL HAZARD - Compressed gas, 400 PSIG at 70°F

CONDITIONS OR MATERIALS TO AVOID - None

FLASH POINT - N/A      LEL - N/A      UEL - 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, 400 PSIG at 70°F. Do not exceed 120°F.

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**HEALTH HAZARDS**

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HEALTH HAZARDS – Central nervous system (CNS) depression and cardiac sensitization, methane as an asphyxiant (ACGIH 2013)

SIGNS AND SYMPTOMS OF EXPOSURE – Exposure to an asphyxiant such as methane causes, hypoxia, with symptoms of CNS depression and cardiac sensitization.

PRIMARY ROUTES OF ENTRY - Inhalation

TARGET ORGANS – CNS and heart.

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

EXPOSURE LIMITS – None asphyxiant(ACGIH 2013)

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

EMERGENCY AND FIRST AID PROCEDURES - Remove From Exposure. Administer Oxygen. Consult Physician Immediately

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**SAFE HANDLING AND USE**

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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 - 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.

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**CONTROL MEASURES**

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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 13, February 2014

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.