

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

PRODUCT IDENTITY

LABEL IDENTITY - MSA P/N 478192 Calibration Check Gas, 1.45% Methane and 15% Oxygen in Nitrogen
CHEMICAL NAME - Methane, Oxygen, Nitrogen Mixture
ADDITIONAL IDENTITIES - MSA P/N 478192 Calibration Gas
FORMULA - $CH_4 + O_2 + N_2$

APPLICABLE CHEMICAL CONTENTS

	<u>%</u>	<u>TWA</u>
Methane (CAS 74-82-8)	1.45	1000 ppm*
Oxygen (CAS 7782-44-7)	15	None**
Nitrogen (CAS 7727-37-9)	Balance	None

*Methane as an alkane (ACGIH 2008)

**Nitrogen is a simple asphyxiant

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
BOILING POINT - N/A
VAPOR PRESSURE - N/A
VAPOR DENSITY (AIR = 1) - < 1
SOLUBILITY IN WATER - Methane - 9 cm³/100 ml (20°C)
Oxygen - 3.2 cm³/100 ml (25°C)
Nitrogen - 2.3 cm³/100 ml (0°C)
SPECIFIC GRAVITY (H₂O = 1) - N/A
PERCENT VOLATILE BY VOLUME - N/A

N/A - Not Applicable

PHYSICAL HAZARD INFORMATION

PHYSICAL HAZARD - Compressed gas, 1000 PSIG at 70°F
CONDITIONS OR MATERIALS TO AVOID - None
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 - Methane as an alkane TWA 1000 ppm (ACGIH 2008).

SIGNS AND SYMPTOMS OF EXPOSURE- Methane as an alkane CNS depression; cardiac sensitization.

PRIMARY ROUTES OF ENTRY - Inhalation

TARGET ORGANS – Heart, lungs, CNS

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

EXPOSURE LIMITS - Methane as an alkane TWA 1000 ppm (ACGIH 2008).

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.

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 - 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. 11, February 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.