MATERIAL SAFETY DATA SHEET
20 CFR 1910.1200 OSHA Hazard
Communication Rule Formert
Chein-Tel 24 Hour Emergency 1-1-800-255-3924

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

PRODUCT IDENTITY

LABEL IDENTITY - MSA P/N 10048280 Calibration Check Gas, 60 ppm Carbon Monoxide, 1.45 % Methane, 15% Oxygen, 20 ppm Hydrogen Sulfide, Balance Nitrogen

CHEMICAL NAME - Carbon Monoxide, Methane, Oxygen, Hydrogen Sulfide, Nitrogen Mixture

ADDITIONAL IDENTITIES - MSA P/N 10048280 Calibration Gas

FORMULA - CO + CH4 + O2 + H2S + N2

APPLICABLE CHEMICAL CONTENTS

<table>
<thead>
<tr>
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<th>TWA</th>
<th>STEL</th>
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</thead>
<tbody>
<tr>
<td>Carbon Monoxide (CAS 630-08-0) (ACGIH 2005)</td>
<td>0.0000</td>
<td>25 ppm</td>
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<tr>
<td>Methane (CAS 154-22-8)</td>
<td>1.45</td>
<td>1000 ppm</td>
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<tr>
<td>Oxygen (CAS 7782-44-7)</td>
<td>15</td>
<td>None</td>
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<tr>
<td>Hydrogen Sulfide (CAS 7783-06-4)</td>
<td>0.0020</td>
<td>15 ppm</td>
</tr>
<tr>
<td>Nitrogen (CAS 7727-37-9)</td>
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<td>Balance</td>
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Methane as an alkane (ACGIH 2005)

NOTE: Gas under Pressure, 500 PSIG at 70°F. Approx. 34 Liters Gas at Atmospheric Pressure

PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR - Colorless, Odorless Gas
BOILING POINT - N/A
SPECIFIC GRAVITY (H2O = 1) - N/A
VAPOR PRESSURE - N/A
PERCENT VOLATILE BY VOLUME - N/A
VAPOR DENSITY (AIR = 1) - Approx. 1
SOLUBILITY IN WATER - Carbon Monoxide - 3.5 cm³/100 ml (20°C)
Methane - 9 cm³/100 ml (20°C)
Oxygen - 3.2 cm³/100 ml (20°C)
Hydrogen Sulfide - 4.57 cm³/100 ml (20°C)
Nitrogen - 2.3 cm³/100 ml (20°C)

*N.A. - Not Applicable

PHYSICAL HAZARD INFORMATION

PHYSICAL HAZARD - Compressed gas, 500 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, 500 PSIG at 70°F. Do not exceed 120°F.

SAFETY AND HANDLING

HEALTH HAZARDS

- Methane as an alkane (ACGIH 2005). Carbon monoxide TCLA (Human) is reportedly 630 ppm/45 minutes; LC50 (Human) 5096 ppm/5 minutes. Hydrogen sulfide LC50 - 800 ppm/5 minutes. No effects known below 10 ppm.

SIGNS AND SYMPTOMS OF EXPOSURE - Methane as an alkane CNS Depression and cardiac sensitization. Exposure to 500-1800 ppm Carbon Monoxide may cause headache, rapid breathing, nausea, weakness, dizziness and confusion. Hydrogen sulfide is an irritant of the eyes and respiratory tract.

PRIMARY ROUTES OF ENTRY - Ingestion, eyes.

TARGET ORGANS - Methane CNS and heart. Carbon monoxide; Lungs, Blood, and Tissues. Carbon monoxide at toxic concentrations causes tissue hypoxia (lack of oxygen) by preventing blood from transporting sufficient oxygen. Hydrogen sulfide is an irritant of the eyes and respiratory tract.

MEDICAL CONDITIONS GENERALLY RECOGNIZED AS BEING AGGRAVATED BY EXPOSURE - Pre-existing respiratory conditions may be aggravated by exposure to this gas mixture. Carbon monoxide can aggravate some diseases of the cardiovascular system, such as coronary artery disease and angina pectoris. Because of the presence of Hydrogen Sulfide, eye disorders or skin problems may be aggravated by over-exposure to this gas mixture.


CANCER OR GENETIC EFFECTS - NIOSH BTECS, OSHA, NTP or IARC does not list Component gases.


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. 1, December 2006

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