

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 acetylene, nitrogen and oxygen substances subject to the Pennsylvania Worker and Community Right-to-Know Act.

PRODUCT IDENTITY

LABEL IDENTITY - MSA P/N 10100007 Calibration Check Gas, 1.25% acetylene in Air

CHEMICAL NAME - Acetylene, Oxygen, Nitrogen Mixture

ADDITIONAL IDENTITIES - MSA P/N 10100007 Calibration Gas

FORMULA - $C_2H_2 + O_2 + N_2$

APPLICABLE CHEMICAL CONTENTS

	<u>%</u>	<u>TWA</u>
Acetylene (CAS 74-86-2) (ACGIH 2012)	1.25	asphyxiant
Oxygen (CAS 7782-44-7)	20.8	None
Nitrogen (CAS 231-783-9)	Balance	None

NOTE: Gas under pressure, 1000 PSIG at 70°F, Approx. 100 liters gas at atmospheric pressure.
Acetylene is a simple asphyxiant

PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR – Colorless gas with a slight garlic like odor.

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 - Acetylene- 1.0 cm³/100 ml
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 - None

FLASH POINT – None substance is 50% LEL Acetylene LEL – 2.3% UEL – 100%

EXTINGUISHING MEDIA - This gas mixture is not flammable. Use extinguishing media appropriate for surrounding fire.

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.
Containers when involved in fire may rupture or burst in the heat of a fire.

HEALTH HAZARDS

HEALTH HAZARDS – Overexposure may cause the following:

- Acute: Acetylene may cause drowsiness in high concentration, however due to the low concentration in this gas mixture it is unlikely to occur.
- Chronic: None associated with this gas.

Acetylene: TC_{LO} (inhalation, human) = 20 pph (part per hundred); central nervous system, respiratory system effects.
LC_{LO} (inhalation, human) = 500,000 ppm/ 5 minutes
Inhalation= Unspecified effects LC_{LO}: 50 pph/ 5 minutes

SIGNS AND SYMPTOMS OF EXPOSURE – Headache, dizziness, drowsiness.

PRIMARY ROUTES OF ENTRY - Inhalation

TARGET ORGANS – Respiratory System, Central Nervous system.

MEDICAL CONDITIONS GENERALLY RECOGNIZED AS BEING AGGRAVATED BY EXPOSURE – Acute or chronic respiratory conditions may be aggravated by over-exposure to the components of this product.

EXPOSURE LIMITS – None for Air.

Acetylene:

- ARAB Republic of Egypt: TWA 1ppm (RTECS)
- Switzerland: MAK 1000 ppm –week (RTECS)
- NIOSH: Ceiling 2500 ppm/15 minutes

CARCINOGENICITY DATA - Not listed by Federal OSHA list, NTP, CAL/OSHA, and IARC.

MUTATION DATA – No mutagenicity effects described for this material.

REPRODUCTIVE EFFECTS DATA – No reproductive, embryonic or teratogenic effects described for this material.

EMERGENCY AND FIRST AID PROCEDURES - Overexposure to acetylene is not indicated with intended product use due to the limited quantity of acetylene contained in an individual cylinder of P/N 10100007.

FIRST AID - Remove the victim to fresh air. Apply artificial respiration if the victim is not breathing. Give oxygen if breathing is difficult. GET MEDICAL ATTENTION IMMEDIATELY, EVEN IF THE VICTIM IS NOT COMPLAINING OF DISCOMFORT.

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 outdoors with the proper regulator. 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, March 25, 2013

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.