

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

PRODUCT IDENTITY

LABEL IDENTITY - MSA P/N 804532 Calibration Check Gas, 0.75% Pentane in Air

CHEMICAL NAME - Pentane, Oxygen, Nitrogen Mixture

ADDITIONAL IDENTITIES - MSA P/N 804532 Calibration Gas

FORMULA - $C_5H_{12} + O_2 + N_2$

APPLICABLE CHEMICAL CONTENTS

	<u>%</u>	<u>TWA</u>	<u>OSHA PEL</u>
Pentane (CAS 109-66-0)	0.75	0.06%	0.1 %
Air	Balance	None	None

NOTE: Gas Under Pressure, 730 PSIG at 70°F, Approx. 75 Liters gas at atmospheric pressure

PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR - Colorless Gas, Faint Hydrocarbon 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 - Pentane - 11 cm³/100 ml (16°C)
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, 730 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 –

1. Gas under pressure, 730 PSIG at 70°F.
2. Do not exceed 120°F.

IMPORTANT USAGE INSTRUCTIONS:

Extreme cold may cause gas components to separate. Separated components may create flammable or explosive atmospheres when released from cylinder. Therefore do not use for instrument calibration if cylinder temperature is below 15°C (60°F). If cylinder is inadvertently used below this temperature, treat its contents as if were explosive and dispose of the cylinder by:

1. Allow cylinder to reach room temperature.
2. Vent entire contents in an open area free of an ignition source.

Recalibrate instrument with a new cylinders as previous calibration may be in error. Failure to follow this warning can result in serious personal injury or death.

HEALTH HAZARDS

HEALTH HAZARDS – Components of this gas mixture (n-pentane) can cause anesthetic or peripheral neuropathy effects.

SIGNS AND SYMPTOMS OF EXPOSURE - Pentane may be irritating to mucous membranes, cause dizziness and headaches. Long term exposure can cause chronic neurological disorder such as damage to the nerves in the hands and feet (peripheral neuropathy).

PRIMARY ROUTES OF ENTRY - Inhalation

TARGET ORGANS - Respiratory tract

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

EXPOSURE LIMITS – ACGIH (2010), Pentane 600 ppm. OSHA PEL 1000 ppm.

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.

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. 7, January 2011

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.