

MATERIAL SAFETY DATA SHEET
29 CFR 1910.1200 OSHA Hazard
Communication Rule Format
Chem-Tel 24 Hour Emergency # 1-800-255-3924

MINE SAFETY APPLIANCES COMPANY
P.O. Box 426
Pittsburgh, PA 15230
PHONE (412) 967-3000

This product contains butane, carbon dioxide, and nitrogen, substances subject to the Pennsylvania Worker and Community Right-To-Know Act.

PRODUCT IDENTITY

LABEL IDENTITY - MSA P/N 10075802 Calibration Check Gas, 8% Butane in Nitrogen

CHEMICAL NAME - Butane, Nitrogen Mixture

ADDITIONAL IDENTITIES - MSA P/N 10075802 Calibration Gas

FORMULA - C_4H_{10} , N_2

APPLICABLE CHEMICAL CONTENTS

	<u>%</u>	<u>TWA</u>
Butane (106-97-8)(as an alkane)(ACGIH 2005)	8	1000 ppm
Nitrogen (CAS 7727-37-9)	balance	None

NOTE: Gas under pressure, 200 PSIG at 70°F, Approx. 11 liters gas at atmospheric pressure

PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR – Colorless, odorless gas

BOILING POINT - N/A

SPECIFIC GRAVITY ($H_2O = 1$) – 0.601 for Nitrogen

VAPOR PRESSURE - N/A

PERCENT VOLATILE BY VOLUME - N/A

VAPOR DENSITY (AIR = 1) – 0.9

SOLUBILITY IN WATER - Butane- 0.0061cm³/100ml (20°C)
Nitrogen - slightly soluble

PHYSICAL HAZARD INFORMATION

PHYSICAL HAZARD - Compressed gas, 200 PSIG at 70°F. Flammable gas.

CONDITIONS OR MATERIALS TO AVOID - Avoid sparks, flames, and other sources of combustion. Avoid strong oxidizers (i.e. chlorine, bromine pentafluoride, oxygen difluoride and nitrogen trifluoride) substances. Gas under pressure do not exceed 120°F.

FLASH POINT -60°C (-76°F) (Closed Cup)

Butane LEL – 1.8%

Butane UEL – 8.4%

EXTINGUISHING MEDIA – Extinguish fires of this gas by shutting –off the source of gas. Use water spray to cool fire-exposed containers, structures and equipment.

UNUSUAL FIRE AND EXPLOSION HAZARDS – When involved in a fire, butane (the flammable component of this gas mixture) will ignite and decompose to produce toxic gases including carbon monoxide and carbon dioxide. Gas under pressure do not exceed 120°F.

HEALTH HAZARDS

HEALTH HAZARDS- Before adverse health effects or suffocation could occur the LEL of butane in air may be exceeded possibly causing an explosive atmosphere as well as an oxygen deficient environment. Due to the small size of the individual cylinder of this product, no health effects are anticipated under routine circumstances of use. The most significant hazard associated with this gas mixture is that it contains less than 19.5% oxygen and there is a potential for exposure to oxygen deficient atmospheres. This is unclear in meaning.

SIGNS AND SYMPTOMS OF EXPOSURE - Individuals in an oxygen deficient environment may experience headaches, ringing in the ears, dizziness, drowsiness, unconsciousness nausea, vomiting and depression of all the senses.

PRIMARY ROUTES OF ENTRY – Inhalation.

TARGET ORGANS – Respiratory system, eyes, hear, cardiovascular system, and CNS.

MEDICAL CONDITIONS GENERALLY RECOGNIZED AS BEING AGGRAVATED BY EXPOSURE – Acute or chronic respiratory conditions may be aggravated by overexposure to the contents of this cylinder.

EXPOSURE LIMITS – (ACGIH 2005) Butane (as an alkane)1000 ppm. Nitrogen: None

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. Avoid breathing gas.

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, September 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 assume all risks in handling, using or storing this product.

