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 1000 Cranberry Woods Drive Cranberry Township, PA 16066 PHONE (724) 776-8900

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

# PRODUCT IDENTITY

LABEL IDENTITY - MSA P/N 711086 Calibration Check Gas, 5 ppm Hydrogen Sulfide in Nitrogen

CHEMICAL NAME - Hydrogen Sulfide, Nitrogen Mixture

ADDITIONAL IDENTITIES - MSA P/N 711086 Calibration Gas

FORMULA -  $H_2S$  in  $N_2$ 

## APPLICABLE CHEMICAL CONTENTS

 Hydrogen Sulfide (CAS 7783-06-4) (ACGIH 2012)
 %
 TWA
 STEL

 Hydrogen Sulfide (CAS 7783-06-4) (ACGIH 2012)
 0.0005
 1 ppm
 5 ppm

 Nitrogen (CAS 7727-37-9)
 Balance
 None

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

# PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR - Colorless, Malodorous Gas

Following information is for Nitrogen the main component of this gas mixture

BOILING POINT: -320.4 °F (-195.8 °C)

SPECIFIC GRAVITY (air = 1) @ $70^{\circ}$ F (21.1  $^{\circ}$ 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/ft (1.153 kg/m)

SOLUBILITY IN WATER -  $H_2S$  -  $437 \text{ cm}^3/100 \text{ ml } (0^{\circ}\text{C})$ 

Nitrogen - 2.3 cm $^3/100$  ml (0°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 Calibration 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.

## **HEALTH HAZARDS**

HEALTH HAZARDS - LC<sub>10</sub> 800 ppm/5 minutes (H<sub>2</sub>S). No effects known below 10 ppm H<sub>2</sub>S. Nitrogen is an asphyxiant.

SIGNS AND SYMPTOMS OF EXPOSURE - H<sub>2</sub>S is an irritant of the eyes and respiratory tract.

PRIMARY ROUTES OF ENTRY - Inhalation, Eyes

TARGET ORGANS - H<sub>2</sub>S is an irritant of the eyes and respiratory tract.

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

EXPOSURE LIMITS - ACGIH 2012: H<sub>2</sub>S 1 ppm, STEL 5 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. Avoid Breathing Gas.

WASTE DISPOSAL - Do not puncture or incinerate cylinder. Before discarding cylinder, slowly release contents to a safe exhaust.

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. 6, October 2012

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.