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

PRODUCT IDENTITY

LABEL IDENTITY -

MSA P/N 803102 Calibration Check Gas, 0.8% Hydrogen in Air

CHEMICAL NAME -

Hydrogen, Oxygen, Nitrogen Mixture

ADDITIONAL IDENTITIES - MSA P/N 803102 Calibration Gas

FORMULA -

H₂, O₂, N₂

APPLICABLE CHEMICAL CONTENTS

Hydrogen (CAS 1333-74-0)

% TWA

0.8 None* Balance None

NOTE: Gas Under Pressure, 1000 PSIG at 70°F, Approx. 100 Liters Gas at Atmospheric Pressure

PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR - Colorless, Odorless Gas

BOILING POINT - N/A

SPECIFIC GRAVITY ($H_2O = 1$) - N/A

VAPOR PRESSURE - N/A

PERCENT VOLATILE BY VOLUME - N/A

VAPOR DENSITY (AIR = 1) - < 1

SOLUBILITY IN WATER -

Hydrogen - 1.91 cm³/100 ml (25°C)

Oxygen - $3.2 \text{ cm}^3/100 \text{ ml} (25^{\circ}\text{C})$ Nitrogen - $2.3 \text{ cm}^3/100 \text{ ml } (0^{\circ}\text{C})$

N/A - Not Applicable

PHYSICAL HAZARD INFORMATION

PHYSICAL HAZARD - Compressed Gas, 1000 PSIG at 70°F

CONDITIONS OR MATERIALS TO AVOID - None

FLASH POINT - 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, 1000 PSIG at 70°F. Do not exceed 120°F.

^{*}Hydrogen is a simple asphyxiant (ACGIH 2001)

HEALTH HAZARDS

HEALTH HAZARDS - None known for 0.8% Hydrogen in air. Hydrogen is a simple asphyxiant.

SIGNS AND SYMPTOMS OF EXPOSURE - N/A

PRIMARY ROUTES OF ENTRY - Inhalation

TARGET ORGANS - N/A

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

EXPOSURE LIMITS - None. Hydrogen is a simple asphyxiant.

CARCINOGENICITY DATA - NIOSH RTECS, OSHA, NTP or IARC does not list component gases.

EMERGENCY AND FIRST AID PROCEDURES - Remove from exposure. If breathing has stopped, give artificial respiration. Administer oxygen. Consult a physician immediately

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.

STORAGE - Store in a cool, dry, well-ventilated area. Do not exceed 120°F.

CONTROL MEASURES

PERSONAL PROTECTIVE EQUIPMENT - None

ENGINEERING CONTROLS - None

WORK PRACTICES - 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, November 2002

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.