

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

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**PRODUCT IDENTITY**

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LABEL IDENTITY - MSA P/N 808978 Calibration Check Gas, 10 ppm Sulfur Dioxide in Air  
CHEMICAL NAME - Sulfur Dioxide, Oxygen, Nitrogen Mixture  
ADDITIONAL IDENTITIES - MSA P/N 808978 Calibration Gas  
FORMULA - SO<sub>2</sub> in Air

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**APPLICABLE CHEMICAL CONTENTS**

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	<u>%</u>	<u>TWA</u>
Sulfur Dioxide (CAS 7446-09-5) STEL 5 ppm (ACGIH 1995-96) Air	0.0010 Balance	2 ppm none

NOTE: Gas Under Pressure, 500 PSIG at 70°F, Approx. 58 liters gas at atmospheric pressure

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**PHYSICAL AND CHEMICAL PROPERTIES**

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APPEARANCE AND ODOR - Colorless, malodorous gas  
BOILING POINT - N/A\*  
VAPOR PRESSURE - N/A  
VAPOR DENSITY (Air=1) Approx. 1  
SOLUBILITY IN WATER - Sulfur Dioxide - 22.8 grams/100 ml (0°C)  
Oxygen - 3.2 cm<sup>3</sup>/100 ml (25°C)  
Nitrogen - 2.3 cm<sup>3</sup>/100 ml (0°C)  
SPECIFIC GRAVITY (H<sub>2</sub>O=1) - N/A  
PERCENT VOLATILE BY VOLUME - N/A

\*N/A - Not Applicable

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**PHYSICAL HAZARD INFORMATION**

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PHYSICAL HAZARD - Compressed Gas, 500 PSIG at 70°F  
CONDITIONS OR MATERIALS TO AVOID - None  
FLASH POINT - Not Applicable      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 - Gas under pressure, 500 PSIG at 70°F. Do not exceed 120°F.

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**HEALTH HAZARDS**

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HEALTH HAZARDS - Refer to RTECS for mutation, reproductive and tumorigenic references. SO<sub>2</sub> is an irritant of the mucous membranes, skin and eyes. In rabbits 6 ppm/4 hours/32 days produces mild eye irritation. INH-Hmn LC<sub>LO</sub> = 1000 ppm/10 minutes. INH-Hmn LC<sub>LO</sub> = 3000 ppm/5 minutes. INH-Mus LC<sub>LO</sub> = 6000 ppm/5 hour. INH-Hmn TC<sub>LO</sub> = 3 ppm/5 days. INH-Mus LC<sub>50</sub> = 3000 ppm/30 minutes. INH-MAN TC<sub>LO</sub> = 4 ppm/1 minute. INH-Guinea pig LC<sub>LO</sub> = 1039 ppm/24 hour. INH-Hmn TC<sub>LO</sub> = 12 ppm/1 hour

SIGNS AND SYMPTOMS OF EXPOSURE - Irritation of throat, nose and eyes; choking; cough.

PRIMARY ROUTES OF ENTRY - Inhalation, eyes

TARGET ORGANS - mucous membranes, eyes, skin

MEDICAL CONDITIONS GENERALLY RECOGNIZED AS BEING AGGRAVATED BY EXPOSURE: Individuals with asthma reportedly demonstrate enhanced sensitivity to SO<sub>2</sub> exposure.

EXPOSURE LIMITS - ACGIH 1995-96; TWA 2 ppm; STEL 5 ppm

CARCINOGENICITY DATA - Component gases are not listed by NIOSH, RTECS, OSHA, NTP or IARC. Animal experimentation reportedly indicates that sulfur dioxide may promote the activity of other substances when present together.

EMERGENCY AND FIRST AID PROCEDURES - The contents of P/N 808978 Calibration Check Gas (58 liters of 10 ppm SO<sub>2</sub> in Air) can not sustain a material concentration of sulfur dioxide when released to the atmosphere, and overexposure is unlikely under expected conditions of use. Nevertheless, should an overexposure somehow occur remove affected person from exposure, if breathing has stopped give artificial respiration, if breathing is difficult give oxygen. Get immediate medical attention in all cases.

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**SAFE HANDLING AND USE**

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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/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.

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**CONTROL MEASURES**

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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. 4, June 1999

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.