

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

PRODUCT IDENTITY

LABEL IDENTITY - MSA P/N 711070 Calibration Check Gas, 10 ppm Sulfur Dioxide in Air
CHEMICAL NAME - Sulfur Dioxide, Oxygen, Nitrogen Mixture
ADDITIONAL IDENTITIES - MSA P/N 711070 Calibration Gas
FORMULA - SO₂ in Air

APPLICABLE CHEMICAL CONTENTS

	<u>ppm</u>	<u>ACGIH-TWA</u>	<u>ACGIH-STEL</u>	<u>OSHA-PEL</u>
Sulfur Dioxide(CAS 7446-09-5)(ACGIH 2011)	10 ppm	-----	0.25ppm	5 ppm
Air	Balance	-----	-----	-----

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°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 - Sulfur Dioxide - 22.8 grams/100 ml (0°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, 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.

HEALTH HAZARDS

HEALTH HAZARDS – Sulfur dioxide is not listed as a carcinogen per NTP, IARC, and OSHA. The irritant action of sulfur dioxide is caused by the formation of sulfurous or sulfuric acid when the gas dissolves in water.

SIGNS AND SYMPTOMS OF EXPOSURE - Inhalation causes bronchoconstriction caused by sulfur dioxide is concentration related. Exposure to the vapors is corrosive and irritating to the eye and the skin.

PRIMARY ROUTES OF ENTRY – Inhalation, dermal and eyes

TARGET ORGANS - lungs, upper respiratory tract, skin, and eyes.

MEDICAL CONDITIONS GENERALLY RECOGNIZED AS BEING AGGRAVATED BY EXPOSURE:

Exposure may aggravate any pre-existing eye, skin, or respiratory disorder. Smokers and persons with pre-existing respiratory (i.e. asthma), nasal and cardiovascular disease may be more susceptible to effects of sulfur dioxide.

EXPOSURE LIMITS – (ACGIH 2011): STEL 0.25 ppm, OSHA PEL 5ppm.

CARCINOGENICITY DATA - Component gases are not listed by OSHA, NTP or IARC.

EMERGENCY AND FIRST AID PROCEDURES - The contents of P/N 711070 Calibration Check Gas (34 liters of 10 ppm SO₂ 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 administer oxygen. Get immediate medical attention in all cases.

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. 7, May 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.