

Precision Gas Products Inc.

2455 Cawthra Road, Unit 21 Mississauga, Ontario L5A 3P1

Tel: (905)-949-2626/1-888-730-8196

Fax: (905)-949-2688

Emergency Contact: Chemtrec (800) 424-9300

Sulfur Dioxide in Air

0.0001% to 1%

MATERIAL SAFETY DATA SHEET

Identification

Revision Date 01-01-09

Products Name: SULFUR DIOXIDE IN AIR 0.0001% TO 1%

Chemical Family: Gas Mixture

Chemical formula: SO₂ 0.0001% to 1% in Air

MSDS identification Code/ Number: MSDS 109

Composition/ Information on Ingredients

Concentration
Percent by Weight
< .0001 to 3

Ingredient Name

SULFUR DIOXIDE CAS Number: 766-41-7

Exposure Limits

- ACGIH TLV-TWA: 2 ppm
- ACGIH TLV-STEL: 5 ppm
- OSHA PEL-TWA: 5 ppm (transitional)
- OSHA PEL-TWA: 2 ppm (final)
- OSHA PEL-TWA: 5 ppm (final)
- IDLH: 100 ppm

AIR

CAS Number: 25635-88-5

> 99.0 to 99.999

Hazard Identification

No data given

First Aid Measures

Eyes

Persons with potential exposure should not wear contact Lenses. Flush contaminated eyes with copious quantities of water. Part eyelids to assure complete flushing. Continue for 15minutes.

Skin

Remove contaminated clothing as rapidly as possible. Flush affected areas with water. Seek immediate medical attention.

Inhalation

Prompt medical attention is mandatory in all cases of overexposure. Rescue personnel should be equipped with self-contained breathing apparatus. Victims should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. If breathing has stopped, administer artificial resuscitation and supplemental oxygen. Further treatment should be symptomatic and supportive.

Fire Fighting Measures

- Fire and Explosion Hazards: Electrical classification: Nonhazardous
- Extinguishing Media: Nonflammable

Accidental Release Measures

Evacuate all personnel from affected areas. Use appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with an inert gas prior to attempting repairs. If leak is in container or container valve, contact CHEMTREC location for emergency assistance.

Handling and Storage

- Handling and Storage Precautions

Use only in well – ventilated areas. Valve protection caps must remain in place unless container is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure-reducing regulator when connecting cylinder to lower pressure (<3000 psig) piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow into the system.

Protect cylinders from physical damage. Store in cool, dry, well – ventilated area of noncombustible construction away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 130°F (54°C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Use a “first in, first out” inventory system to prevent full cylinders being stored for excessive periods of time. Most metals corrode when in contact with wet sulfur dioxide. Never carry a compressed gas cylinder or a container of a gas in cryogenic liquid form in an enclosed space such as a car trunk, van or station wagon. A leak can result in a fire, asphyxiation or toxic exposure.

Exposure Controls/Personal Protection

Engineering Controls: Hood with forced ventilation. Use local exhaust to prevent accumulation above the exposure limit.

Eye/Face Protection: Safety goggles or glasses.

Skin Protection: Protective gloves of any material.

Other/General Protection: Safety shoes.

Respiratory Protection: Positive pressure air lines with mask or self-contained breathing apparatus should be available for emergency use.

Physical & Chemical Properties

Appearance: A colorless gas.

Odor: Odorless gas.

Basic Physical Properties

Vapor Density (Air = 1): 2.26 sulfur dioxide

Solubility (H₂O): Soluble

Boiling Point: -14.0F -10.0C

Melting Point: -103.9F -75.5C

Vapor Pressure: 49.1 psia (sulfur dioxide)

Stability & Reactivity

Stability: Stable

Incompatible Materials: Organic material.

Hazardous Polymerization: Will not occur

Toxicological Information

Eye Effects: Corrosive and irritating to the eyes. Contact with vapor or liquid cause painful burns and ulceration. Burns to the eyes result in lesions and possible loss of vision.

Skin Effects: Corrosive and irritating to the skin and all living tissue. Toxic level exposure may cause skin lesions resulting in early necrosis and scarring.

Acute Inhalation Effects: Corrosive and irritating to the upper respiratory system and all mucosal tissue. Initial symptoms of exposure include nose and throat irritation, becoming steadily worse, suffocating and painful. The irritation extends to the chest causing a cough reflex that may be violent and painful and may include the discharge of blood or vomiting with eventual collapse. Other symptoms include headache, general discomfort and anxiety.

Miscellaneous Toxicological Information

Carcinogenicity – NTP: No IARC: No OSHA: No

Ecological Information

No Data Given

Disposal Considerations

Do not attempt to dispose of waste or unused quantities. Return in the shipping container properly labeled, with any valve outlet plugs or caps secure and valve protection cap in place to Precision Gas Products for proper disposal.

Transport Information

Proper Shipping Name: Compressed Gas, N.O.S., (Air, Sulfur Dioxide)

Hazardous Class: 2.2

CT (DOT) Identification Number: UN 1956

CT (DOT) Shipping Label: Nonflammable gas

Regulatory Information

SARA Title III Notifications and Information

SARA Title III – Hazard Class: Acute Health Hazard

Chronic Health Hazard

Sudden Release of Pressure Hazard

Other Information

Hazard Rating	Health:	2 Moderate
	Fire:	0 Negligible
	Reactivity:	0 Negligible

MSDS Identification Code/Number: MSDS 109

Reference Documentation

Gaseous or liquid anhydrous ammonia corrodes certain metals at ambient temperature. The presence of oxygen enhances the corrosion of ordinary or semi-alloy steel. The addition of water inhibits this enhancement. Keep anhydrous ammonia systems scrupulously dry.

Compressed gas cylinders should not be refilled except by qualified producers of compressed gases. Shipments of a compressed gas cylinder, which has not been filled by the owner or with his (written) consent is a violation of Federal Law (49CFR).

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