

**Material Safety Data Sheet**

Version 3.0  
Revision Date 08/20/2009  
Print Date 02/09/2011

**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : Sulfur dioxide

Product Number : 295698  
Brand : Aldrich

Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +18003255832  
Fax : +18003255052  
Emergency Phone # : (314) 776-6555

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula : O<sub>2</sub>S  
Molecular Weight : 64.06 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>Sulphur dioxide</b>			
7446-09-5	231-195-2	016-011-00-9	-

**3. HAZARDS IDENTIFICATION****Emergency Overview****OSHA Hazards**

Target Organ Effect, Highly toxic by inhalation, Corrosive

**Target Organs**

Blood

**HMIS Classification**

Health Hazard: 4

Chronic Health Hazard: \*

Flammability: 0

Physical hazards: 0

**NFPA Rating**

Health Hazard: 4

Fire: 0

Reactivity Hazard: 0

**Potential Health Effects****Inhalation**

May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**Skin**  
**Eyes**  
**Ingestion**

May be harmful if absorbed through skin. Causes skin burns.  
Causes eye burns.  
May be harmful if swallowed. Causes burns.

#### 4. FIRST AID MEASURES

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

**In case of skin contact**

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 5. FIRE-FIGHTING MEASURES

**Flammable properties**

Flash point                      no data available

Ignition temperature      no data available

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for fire-fighters**

Wear self contained breathing apparatus for fire fighting if necessary.

#### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods for cleaning up**

Wipe up with absorbent material (e.g. cloth, fleece).

#### 7. HANDLING AND STORAGE

**Handling**

Avoid inhalation of vapour or mist.  
Normal measures for preventive fire protection.

**Storage**

Keep container tightly closed in a dry and well-ventilated place.

Contents under pressure.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
Sulphur dioxide	7446-09-5	TWA	2 ppm	2008-01-01	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Upper Respiratory Tract & Lower Respiratory Tract irritation Adopted values or notations enclosed are those for which changes are proposed in the NIC 2008 Revision or addition to the notice of intended changes See Notice of Intended Changes (NIC) Not classifiable as a human carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories.				
		STEL	5 ppm 13 mg/m3	1996-05-18	USA. ACGIH Threshold Limit Values (TLV)
	Not classifiable as a human carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories. Refers to Appendix A -- Carcinogens. 1996 Adoption				
		TWA	2 ppm 5 mg/m3	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		STEL	5 ppm 13 mg/m3	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	5 ppm 13 mg/m3	1997-08-04	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	The value in mg/m3 is approximate.				
		STEL	5 ppm	2008-01-01	USA. ACGIH Threshold Limit Values (TLV)
	Upper Respiratory Tract & Lower Respiratory Tract irritation Adopted values or notations enclosed are those for which changes are proposed in the NIC 2008 Revision or addition to the notice of intended changes See Notice of Intended Changes (NIC) Not classifiable as a human carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories.				

## Personal protective equipment

### Respiratory protection

Respiratory protection is not required. Where protection is desired, use multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Hand protection

Handle with gloves.

### Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum).

### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

### Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form                      gaseous

### Safety data

pH	no data available
Melting point	-73 °C (-99 °F) - lit.
Boiling point	-10 °C (14 °F) - lit.
Flash point	no data available
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	2,372 hPa (1,779 mmHg) at 21 °C (70 °F)
Density	1.25 g/mL at 25 °C (77 °F)
Water solubility	no data available
Relative vapour density	2.21 - (Air = 1.0)

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions.

### Materials to avoid

Strong reducing agents, Zinc, Strong oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Sulphur oxides

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

no data available

**Irritation and corrosion**

no data available

**Sensitisation**

no data available

**Chronic exposure**

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Sulphur dioxide)

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Potential Health Effects**

<b>Inhalation</b>	May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin burns.
<b>Eyes</b>	Causes eye burns.
<b>Ingestion</b>	May be harmful if swallowed. Causes burns.
<b>Target Organs</b>	Blood,

**Additional Information**

RTECS: WS4550000

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**12. ECOLOGICAL INFORMATION****Elimination information (persistence and degradability)**

no data available

**Ecotoxicity effects**

no data available

**Further information on ecology**

no data available

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**13. DISPOSAL CONSIDERATIONS****Product**

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION****DOT (US)**

UN-Number: 1079 Class: 2.3 (8)

Proper shipping name: Sulfur dioxide

Marine pollutant: No

Poison Inhalation Hazard: Hazard zone C

**IMDG**

UN-Number: 1079 Class: 2.3 (8)

Proper shipping name: SULPHUR DIOXIDE

Marine pollutant: No

EMS-No: F-C, S-U

**IATA**

UN-Number: 1079 Class: 2.3 (8)

Proper shipping name: Sulphur dioxide

IATA Passenger: Not permitted for transport

IATA Cargo: Not permitted for transport

**15. REGULATORY INFORMATION**

**OSHA Hazards**

Target Organ Effect, Highly toxic by inhalation, Corrosive

**DSL Status**

All components of this product are on the Canadian DSL list.

**SARA 302 Components**

Sulphur dioxide

CAS-No.  
7446-09-5

Revision Date  
2007-03-01

**SARA 313 Components**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

Sulphur dioxide

CAS-No.  
7446-09-5

Revision Date  
2007-03-01

**Pennsylvania Right To Know Components**

Sulphur dioxide

CAS-No.  
7446-09-5

Revision Date  
2007-03-01

**New Jersey Right To Know Components**

Sulphur dioxide

CAS-No.  
7446-09-5

Revision Date  
2007-03-01

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

**16. OTHER INFORMATION**

**Further information**

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.