

## Material Safety Data Sheet

Version 4.1  
Revision Date 02/13/2011  
Print Date 03/23/2011

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	: Sulfur tetrafluoride	
Product Number	: 84730	
Brand	: Aldrich	
Product Use	: For laboratory research purposes.	
Supplier	: Sigma-Aldrich 3050 Spruce Street SAINT LOUIS MO 63103 USA	Manufacturer : Sigma-Aldrich Corporation 3050 Spruce St. St. Louis, Missouri 63103 USA
Telephone	: +18003255832	
Fax	: +18003255052	
Emergency Phone # (For both supplier and manufacturer)	: (314) 776-6555	
Preparation Information	: Sigma-Aldrich Corporation Product Safety - Americas Region 1-800-521-8956	

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

##### OSHA Hazards

Compressed Gas, Toxic by inhalation., Corrosive

##### GHS Classification

Gases under pressure (Compressed gas)  
Acute toxicity, Inhalation (Category 2)  
Skin corrosion (Category 1B)  
Serious eye damage (Category 1)  
Specific target organ toxicity - single exposure (Category 3)

##### GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H280	Contains gas under pressure; may explode if heated.
H314	Causes severe skin burns and eye damage.
H330	Fatal if inhaled.
H335	May cause respiratory irritation.

Precautionary statement(s)

P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284	Wear respiratory protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/ physician.
P410 + P403	Protect from sunlight. Store in a well-ventilated place.

##### HMIS Classification

Health hazard: 3  
Flammability: 0  
Physical hazards: 0

**NFPA Rating**

Health hazard: 4  
Fire: 0  
Reactivity Hazard: 0

**Potential Health Effects**

**Inhalation** Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.  
**Skin** May be harmful if absorbed through skin. Causes skin burns.  
**Eyes** Causes eye burns.  
**Ingestion** May be harmful if swallowed.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula : F<sub>4</sub>S  
Molecular Weight : 108.06 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>Sulphur tetrafluoride</b>			
7783-60-0	232-013-4	-	-

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**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. Take victim immediately to hospital. Consult a physician.

**In case of eye contact**

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

**If swallowed**

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

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**5. FIRE-FIGHTING MEASURES**

**Conditions of flammability**

Not flammable or combustible.

**Suitable extinguishing media**

Dry powder

**Special protective equipment for fire-fighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Hydrogen fluoride

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**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 and materials for containment and cleaning up**

Do not flush with water.

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**7. HANDLING AND STORAGE****Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

**Conditions for safe storage**

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

Never allow product to get in contact with water during storage.

Contents under pressure.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Basis
Sulphur tetrafluoride	7783-60-0	CEIL	0.1 ppm 0.4 mg/m <sup>3</sup>	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		C	0.1 ppm 0.4 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
		CEIL	0.1 ppm 0.44 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)

**Personal protective equipment****Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Eye protection**

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**

Complete suit protecting against chemicals, Flame retardant protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**

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

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**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

Form Compressed gas

Colour no data available

**Safety data**

pH no data available

Melting Melting point/range: -121.5 - -120.5 °C (-186.7 - -184.9 °F) - lit.

point/freezing point	
Boiling point	-40.4 °C (-40.7 °F) - lit.
Flash point	no data available
Ignition temperature	no data available
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	no data available
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

Reacts violently with water.

### Conditions to avoid

Exposure to moisture.

### Materials to avoid

Do not store near acids., glass, Reacts violently with:., Water

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Hydrogen fluoride  
Other decomposition products - no data available

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Oral LD50

no data available

#### Inhalation LC50

#### Dermal LD50

no data available

#### Other information on acute toxicity

no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/eye irritation

no data available

### Respiratory or skin sensitization

no data available

#### **Germ cell mutagenicity**

no data available

#### **Carcinogenicity**

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- 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.

#### **Reproductive toxicity**

no data available

#### **Teratogenicity**

no data available

#### **Specific target organ toxicity - single exposure (Globally Harmonized System)**

May cause respiratory irritation.

#### **Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

#### **Aspiration hazard**

no data available

#### **Potential health effects**

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

#### **Signs and Symptoms of Exposure**

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

#### **Synergistic effects**

no data available

#### **Additional Information**

RTECS: WT4800000

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## **12. ECOLOGICAL INFORMATION**

#### **Toxicity**

no data available

#### **Persistence and degradability**

no data available

#### **Bioaccumulative potential**

no data available

#### **Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

no data available

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

Offer surplus and non-recyclable solutions to a licensed disposal company. 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: 2418 Class: 2.3 (8)

Proper shipping name: Sulfur tetrafluoride

Marine pollutant: No

Poison Inhalation Hazard: Hazard zone A

**IMDG**

UN number: 2418 Class: 2.3 (8)

EMS-No: F-C, S-U

Proper shipping name: SULPHUR TETRAFLUORIDE

Marine pollutant: No

**IATA**

UN number: 2418 Class: 2.3 (8)

Proper shipping name: Sulphur tetrafluoride

IATA Passenger: Not permitted for transport

IATA Cargo: Not permitted for transport

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**15. REGULATORY INFORMATION****OSHA Hazards**

Compressed Gas, Toxic by inhalation., Corrosive

**SARA 302 Components**

Sulphur tetrafluoride

CAS-No.  
7783-60-0

Revision Date  
1991-07-01

**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**

Sudden Release of Pressure Hazard, Acute Health Hazard

**Massachusetts Right To Know Components**

Sulphur tetrafluoride

CAS-No.  
7783-60-0

Revision Date  
1991-07-01

**Pennsylvania Right To Know Components**

Sulphur tetrafluoride

CAS-No.  
7783-60-0

Revision Date  
1991-07-01

**New Jersey Right To Know Components**

Sulphur tetrafluoride

CAS-No.  
7783-60-0

Revision Date  
1991-07-01

**California Prop. 65 Components**

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

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## 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.

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