1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Sulfur hexafluoride

Product Number: 295701
Brand: Aldrich

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

Telephone: +1 800-325-5832
Fax: +1 800-325-5052
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

GHS Classification
Gases under pressure (Liquefied gas)

GHS Label elements, including precautionary statements

Pictogram

Signal word: Warning

Hazard statement(s)
H280 Contains gas under pressure; may explode if heated.

Precautionary statement(s)
P410 + P403 Protect from sunlight. Store in a well-ventilated place.

HMIS Classification
Health hazard: 0
Flammability: 0
Physical hazards: 0

NFPA Rating
Health hazard: 0
Fire: 0
Reactivity Hazard: 0

Potential Health Effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: May be harmful if swallowed.
3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: F₆S
Molecular Weight: 146.06 g/mol

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfur hexafluoride</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>2551-62-4</td>
</tr>
<tr>
<td>EC-No.</td>
<td>219-854-2</td>
</tr>
</tbody>
</table>

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
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

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

Special protective equipment for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

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

Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions
Do not let product enter drains.

Methods and materials for containment and cleaning up
Clean up promptly by sweeping or vacuum.

7. HANDLING AND STORAGE

Precautions for safe handling
Normal measures for preventive fire protection.

Conditions for safe 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

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Value Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfur hexafluoride 2551-62-4</td>
<td>TWA 1,000 ppm</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA 1,000 ppm 6,000 mg/m3</td>
<td>USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The value in mg/m3 is approximate.</td>
</tr>
<tr>
<td></td>
<td>TWA 1,000 ppm 6,000 mg/m3</td>
<td>USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000</td>
</tr>
<tr>
<td></td>
<td>TWA 1,000 ppm 6,000 mg/m3</td>
<td>USA. NIOSH Recommended Exposure Limits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>May contain highly toxic sulfur pentafluoride as an impurity.</td>
</tr>
<tr>
<td></td>
<td>TWA 2.5 mg/m3</td>
<td>USA. Occupational Exposure Limits (OSHA) - Table Z2</td>
</tr>
<tr>
<td></td>
<td>Z37.28-1969</td>
<td></td>
</tr>
</tbody>
</table>

### 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.

Full contact
- Material: butyl-rubber
- Minimum layer thickness: 0.3 mm
- Break through time: 480 min
- Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

Splash protection
- Material: butyl-rubber
- Minimum layer thickness: 0.3 mm
- Break through time: 480 min
- Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

Eye protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Impervious 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
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form Liquefied gas
Colour no data available

Safety data

pH no data available
Melting point/freezing point Melting point/range: -50 °C (-58 °F) - lit.
Boiling point -64 °C (-83 °F) at 1 hPa (1 mmHg) - lit.
Flash point not applicable
Ignition temperature no data available
Auto-ignition temperature no data available
Lower explosion limit no data available
Upper explosion limit no data available
Vapour pressure 29 hPa (22 mmHg) at 21.1 °C (70.0 °F)
22,057 hPa (16,544 mmHg) at 20 °C (68 °F)
Density no data available
Water solubility no data available
Partition coefficient: n-octanol/water no data available
Relative vapor density 5.04 - (Air = 1.0)
Odour no data available
Odour Threshold no data available
Evaporation rate no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
no data available

Conditions to avoid
no data available

Materials to avoid
Strong oxidizing agents

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

11. TOXICOLOGICAL INFORMATION

Acute toxicity
Oral LD50 no data available
Inhalation LC50 no data available
**Acute Toxicity**

**Dermal LD50**
no data available

**Other information on acute toxicity**
LD50 Intravenous - rabbit - 5,790 mg/kg

**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)**
no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**
no data available

**Aspiration hazard**
no data available

**Potential health effects**

- **Inhalation**: May be harmful if inhaled. May cause respiratory tract irritation.
- **Ingestion**: May be harmful if swallowed.
- **Skin**: May be harmful if absorbed through skin. May cause skin irritation.
- **Eyes**: May cause eye irritation.

**Signs and Symptoms of Exposure**
May be harmful., Nausea, Dizziness, Headache, Central nervous system depression

**Synergistic effects**
no data available

**Additional Information**
RTECS: WS4900000

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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

### 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.

### 14. TRANSPORT INFORMATION

**DOT (US)**
- UN number: 1080  Class: 2.2
- Proper shipping name: Sulfur hexafluoride
- Marine Pollutant: No
- Poison Inhalation Hazard: No

**IMDG**
- UN number: 1080  Class: 2.2  EMS-No: F-C, S-V
- Proper shipping name: SULPHUR HEXAFLUORIDE
- Marine Pollutant: No

**IATA**
- UN number: 1080  Class: 2.2
- Proper shipping name: Sulphur hexafluoride

### 15. REGULATORY INFORMATION

**OSHA Hazards**
Compressed Gas

**SARA 302 Components**
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**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

**Massachusetts Right To Know Components**
- **Sulfur hexafluoride**
  - CAS-No.: 2551-62-4
  - Revision Date: 1993-04-24

**Pennsylvania Right To Know Components**
- **Sulfur hexafluoride**
  - CAS-No.: 2551-62-4
  - Revision Date: 1993-04-24
**New Jersey Right To Know Components**

Sulfur hexafluoride  
CAS-No. 2551-62-4  
Revision Date 1993-04-24

**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.

16. **OTHER INFORMATION**

**Further information**

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