

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

| Component | Concentration |
|----------------------------|---------------|
| Sulfur hexafluoride | |
| CAS-No. | 2551-62-4 |
| EC-No. | 219-854-2 |
| | - |

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

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)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

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

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

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
Proper shipping name: SULPHUR HEXAFLUORIDE
Marine Pollutant: No

EMS-No: F-C, S-V

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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