

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	<b>Sulfur Hexafluoride</b>
Chemical Formula	F <sub>6</sub> S
Molecular Weight	146.06 g/mol
CAS No.	2551-62-4
EC No.	219-854-2
Supplier Address*	ISOFLEX USA PO Box 29475 San Francisco CA 94129 United States
Telephone	+1 415-440-4433
Fax	+1 415-563-4433
Emergency Phone Number (both supplier and manufacturer)	Infotrac/ +1 800-535-5053  *May include subsidiaries or affiliate companies/divisions
Email	<a href="mailto:iusa@isoflex.com">iusa@isoflex.com</a>
Website	<a href="http://www.isoflex.com">www.isoflex.com</a>
Preparation Information	ISOFLEX USA Product Safety +1 415-440-4433

## 2. HAZARDOUS IDENTIFICATION

**Classification of the substance or mixture:** Gases under pressure (Liquified gas), H280  
Simple Asphyxiant  
For the full text of the H-Statements mentioned in this section, see Section 16.

### GHS label elements

**Pictogram**



**Precautionary Label Statements**

Warning

**Hazard Statement(s)**

H280: Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation.

**Precautionary Statement(s)**

P410 + P403: Protect from sunlight. Store in a well-ventilated place.

### Supplemental Information

Contains fluorinated greenhouse gases

### Other Hazards

Asphyxiant in high concentrations  
Contact with liquid may cause cold burns/frostbite

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### 3. COMPOSITION / INFORMATION ON INGREDIENTS

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### 4. FIRST AID MEASURES

#### *General Advice*

Consult a physician. Show this SDS to the doctor in attendance. Move out of dangerous area. Hydrofluoric (HF) acid burns require immediate and specialized first aid and medical treatment. Symptoms may be delayed up to 24 hours depending on the concentration of HF. After decontamination with water, further damage can occur due to penetration/absorption of the fluoride ion. Treatment should be directed toward binding the fluoride ion as well as the effects of the exposure. Skin exposures can be treated with a 2.5% calcium gluconate gel repeated until burning ceases. More serious skin exposures may require subcutaneous calcium gluconate except for digital areas unless the physician is experienced in this technique, due to the potential for tissue injury from increased pressure. Absorption can readily occur through the subungual areas and should be considered when undergoing contamination. Prevention of absorption of the fluoride ion in cases of ingestion can be obtained by giving milk, chewable calcium carbonate tablets or Milk of Magnesia to conscious victims. Conditions such as hypocalcemia, hypomagnesemia and cardiac arrhythmias should be monitored for, since they can occur after exposure.

#### *Inhalation Exposure*

Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### *Oral Exposure*

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

#### *Dermal Exposure*

Wash exposed area with soap and plenty of water. Consult a physician. First treatment with calcium gluconate paste.

#### *Eye Exposure*

Immediately flush eyes with plenty of water.

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### 5. FIREFIGHTING MEASURES

#### *Suitable Extinguishing Media*

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

#### *Special Hazards*

Sulphur oxides, hydrogen fluoride

#### **Firefighting**

#### *Protective Equipment*

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

#### *Further Information*

Use water spray to cool unopened containers.

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### 6. ACCIDENTAL RELEASE MEASURES

#### *Personal Precautions*

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

<i>Environmental Precautions</i>	Do not let product enter drains.
<i>Methods for Cleaning Up</i>	Clean up promptly by sweeping or vacuum.
<i>Reference to Other Sections</i>	For disposal see Section 13.

**7. HANDLING AND STORAGE**

<i>Handling</i>	For precautions see Section 2.2.
<i>Storage</i>	Keep in a tightly closed container in a dry and well-ventilated place. Contents under pressure. Do not store in glass. Storage class (TRGS 510): 2A: Gases

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Component	CAS No.	Value	Control Parameters	Basis
<b>Sulfur hexafluoride</b>	2551-62-4	TWA	1,000 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Asphyxia		
		TWA	1,000 ppm 6,000 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
	May contain highly toxic sulfur pentafluoride as an impurity.			
		TWA	1,000 ppm 6,000 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) – Table Z-1 Limits for Air Contaminants
	The value in mg/m <sup>3</sup> is approximate.			
		PEL	1,000 ppm 6,000 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

**Personal Protective Equipment**

*Personal Respirators*

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).

*Skin Protection*

Use impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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*

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

**Environmental Exposure**

Do not let product enter drains.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	Liquefied gas
Odor	No data available

### Safety Data

Odor Threshold:	No data available
pH:	No data available
Melting/Freezing Point:	-50 °C (-58 °F)
Initial Boiling Point:	-64 °C (-83 °F) at 1 hPa
Flash Point:	Not applicable
Flammability (Solid, Gas):	No data available
Flammability/Explosive Limits:	No data available
Vapor Density:	5.04 (Air = 1.0)
Vapor Pressure:	29 hPa at 21.1 °C (70.0 °F) / 22,157 hPa at 20 °C (68 °F)
Relative Density:	No data available
Solubility (H <sub>2</sub> O):	No data available
Partition Coefficient:	No data available (n-octanol/water)
Auto-ignition Temperature:	No data available
Decomposition Temperature:	No data available
Viscosity:	No data available
Explosive Properties:	No data available
Oxidizing Properties:	No data available

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## 10. STABILITY AND REACTIVITY

<i>Reactivity</i>	No data available
<i>Chemical Stability</i>	Stable under recommended storage conditions
<i>Possibility of Hazardous Reactions</i>	No data available
<i>Conditions to Avoid</i>	Reacts dangerously with glass
<i>Incompatible Materials</i>	Strong oxidizing agents, glass
<i>Decomposition Products</i>	Hazardous decomposition products formed under fire conditions: Sulphur oxides, hydrogen fluoride Other decomposition products: No data available In the event of fire: See section 5

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## 11. TOXICOLOGICAL INFORMATION

<b>Acute Toxicity</b>	No data available
<i>Inhalation</i>	No data available
<i>Dermal</i>	No data available
<i>LD50 Intravenous</i>	Rabbit – 5,790 mg/kg
<b>Skin Corrosion/Irritation</b>	No data available
<b>Serious Eye Damage/Eye Irritation</b>	No data available
<b>Respiratory or Skin Sensitization</b>	No data available
<b>Germ Cell Mutagenicity</b>	No data available

**Carcinogenicity**

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

*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 regulated carcinogen by OSHA.

**Reproductive Toxicity** No data available

**Teratogenicity** No data available

**Specific Target Organ Toxicity / Single Exposure** No data available

**Specific Target Organ Toxicity / Repeated Exposure** No data available

**Aspiration Hazard** No data available

*Additional Information* RTECS: WS4900000  
Fluoride ion can reduce serum calcium levels, possibly causing fatal hypocalcemia.  
May be harmful. Nausea, dizziness, headache, central nervous system depression may occur.

**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* PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

*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)**

*Proper Shipping Name* Sulfur hexafluoride

*Class* 2.2

*UN No.* 1080

*Reportable Quantity (RQ)*

*Poison Inhalation Hazard* No

**sIMDG**

<i>Proper Shipping Name</i>	SULPHUR HEXAFLUORIDE
<i>Class</i>	2.2
<i>UN No.</i>	1080
<i>EMS No.</i>	F-C, S-V

**IATA**

<i>Proper Shipping Name</i>	Sulphur hexafluoride
<i>Class</i>	2.2
<i>UN No.</i>	1080

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**15. REGULATORY INFORMATION**

<b>SARA 302 Components</b>	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
<b>SARA 313 Components</b>	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.
<b>SARA 311/312 Hazards</b>	Sudden Release of Pressure Hazard
<b>Massachusetts Right to Know Components</b>	Sulfur hexafluoride / CAS No. 2551-62-4 / Revision Date 1993-02-16
<b>Pennsylvania Right to Know Components</b>	Sulfur hexafluoride / CAS No. 2551-62-4 / Revision Date 1993-02-16
<b>New Jersey Right to Know Components</b>	Sulfur hexafluoride / CAS No. 2551-62-4 / Revision Date 1993-02-16
<b>California Prop. 65 Components</b>	This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

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**16. OTHER INFORMATION**

<i>Prepared By</i>	ISOFLEX USA PO Box 29475 San Francisco CA 94129 United States
<i>Issuing Date</i>	February 28, 2020
<i>Revision Date</i>	July 29, 2021
<i>Revision Number</i>	2
<i>Revision Note</i>	Required review and update

**ISOFLEX USA's Commonly Used Abbreviations and Acronyms\***

ACGIH	American Conference of Governmental Industrial Hygienists
ADR	European Agreement Concerning the International Carriage of Dangerous Goods by Road
AICS	Australian Inventory of Chemical Substances
ALARA	As Low As Is Reasonably Achievable
AMU	Atomic Mass Unit
ANSI	American National Standards Institute
BLS	Basic Life Support
BOD5	Biochemical Oxygen Demand



CAM	Continuous Air Monitor
CAS	Chemical Abstracts Service (division of the American Chemical Society)
CEN	European Committee for Standardization
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CLP	Classification, Labelling and Packaging (European Union)
COD	Chemical Oxygen Demand
CPR	Controlled Products Regulations (Canada)
CWA	Clean Water Act (USA)
DAC	Derived Air Concentration (USA)
DOE	United States Department of Energy (USA)
DOT	United States Department of Transportation (USA)
DSL	Domestic Substances List (Canada)
EC50	Half Maximal Effective Concentration
ECL	Korean Existing Chemicals List
EINECS	European Inventory of Existing Commercial Chemical Substances
EHS	Environmentally Hazardous Substance
ELINCS	European List of Notified Chemical Substances
EMS	Emergency Response Procedures for Ships Carrying Dangerous Goods
EPA	Environmental Protection Agency (USA)
EPCRA	Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986
GHS	Globally Harmonized System
HMIS	Hazardous Materials Identification System (USA)
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	Intermediate Bulk Containers
ICAO	International Civil Aviation Organization
IDLH	Immediately Dangerous to Life or Health
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
IMDG	International Maritime Code for Dangerous Goods
LC50	Lethal concentration, 50 percent
LD50	Lethal dose, 50 percent
LDLO	Lethal Dose Low
LOEC	Lowest-Observed-Effective Concentration
MARPOL	International Convention for the Prevention of Pollution from Ships
MSHA	Mine Safety and Health Administration (USA)
NCRP	National Council on Radiation Protection & Measurements (USA)
NDSL	Non-Domestic Substances List (Canada)
NFPA	National Fire Protection Association (USA)
NIOSH	National Institute for Occupational Safety and Health (USA)
NOEC	No Observed Effect Concentration
N.O.S.	Not Otherwise Specified
NRC	Nuclear Regulatory Commission (USA)
NTP	National Toxicology Program (USA)
OSHA	Occupational Safety and Health Administration (USA)
PBT	Persistent Bioaccumulative and Toxic Chemical
PEL	Permissible Exposure Limit
PICCS	Philippines Inventory of Chemicals and Chemical Substances
PIH	Poisonous by Inhalation Hazard
RCRA	Resource Conservation and Recovery Act (USA)
RCT	Radiation Control Technician
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals (Europe)
RID	Regulations Concerning the International Transport of Dangerous Goods by Rail
RQ	Reportable Quantity
RTECS	Registry of Toxic Effects of Chemical Substances
SARA	Superfund Amendments and Reauthorization Act (USA)
SNUR	Significant New Use Rule (TSCA)
TDG	Transportation of Dangerous Goods (Canada)
TIH	Toxic by Inhalation Hazard
TLV	Threshold Limit Value

TPQ	Threshold Planning Quantity
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
UN	United Nations (Number)
VOC	Volatile Organic Compound
vPvB	Very Persistent Very Bioaccumulative Chemical
WGK	Wassergefährdungsklassen (Germany: Water Hazard Classes)
WHMIS	Workplace Hazardous Materials Information System

\*One or more of the above-listed items may not appear in this document.

### **General Disclaimer**

For terms and conditions, including limitation of liability, please refer to the purchase agreement in effect between ISOFLEX USA (or any of its affiliates and subsidiaries) and the purchaser.

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The logo for ISO FLEX, featuring the word "ISO" in a light blue font and "FLEX" in a light red font, both in a bold, sans-serif typeface. A large, light blue curved line arches over the text, starting from the left and ending on the right.