

# Safety Data Sheet

## Sulfur Hexafluoride

**PurityPlus Gases**  
6331 East 30th Street  
P.O. Box 19907  
Indianapolis, IN 46219-0907  
317.562.1483 (tel)  
317.562.1484 (fax)

### Section 1: Product and Company Identification

**PurityPlus Gases**

6331 East 30th Street  
P.O. Box 19907  
Indianapolis, IN 46219-0907  
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Product Code: Sulfur Hexafluoride

### Section 2: Hazards Identification



**Danger**

**Hazard Classification:**

Aspiration Hazard (Category 1)  
Gases Under Pressure

**Hazard Statements:**

Contains gas under pressure; may explode if heated  
May be fatal if swallowed and enters airways

**Precautionary Statements**

**Response:**

Do NOT induce vomiting.  
If swallowed: Rinse mouth. Do NOT induce vomiting.  
Immediately call a poison center or doctor.

**Storage:**

Protect from sunlight.  
Store in well-ventilated place.  
Store locked up.

**Disposal:**

Dispose of contents and/or container in accordance with applicable regulations.

## Section 3: Composition/Information on Ingredients

| CAS #     |
|-----------|
| 2551-62-4 |

| Chemical Substance  | Chemical Family | Trade Names   |
|---------------------|-----------------|---|
| SULFUR HEXAFLUORIDE | inorganic, gas  | SULFUR FLUORIDE; SULPHUR HEXAFLUORIDE; ELEGAS; UN 1080; SF6 |

## Section 4: First Aid Measures

| Skin Contact                           | Eye Contact                      | Ingestion  | Inhalation   | Note to Physicians               |
|--|----------------------------------|--|--|----------------------------------|
| Wash exposed skin with soap and water. | Flush eyes with plenty of water. | If a large amount is swallowed, get medical attention. | If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention. | For inhalation, consider oxygen. |

## Section 5: Fire Fighting Measures

| Suitable Extinguishing Media  | Products of Combustion   | Protection of Firefighters   |
|---|--|--|
| Non-flammable. Use suitable extinguishing media for surrounding fire. | Thermal decomposition products or combustion: fluorinated compounds, oxides of sulfur, sulfur compounds, hydrogen fluoride, hydrogen sulfide | <ul style="list-style-type: none"><li>Respiratory protection may be needed for frequent or heavy exposure. Any self-contained breathing apparatus with a full facepiece.</li><li>Respiratory protection may be needed for frequent or heavy exposure. Any self-contained breathing apparatus with a full facepiece.</li><li>Protective material types: leather</li></ul> |

## Section 6: Accidental Release Measures

| Personal Precautions   | Environmental Precautions            | Methods for Containment                      |
|--|--------------------------------------|--|
| Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas. | Prevent environmental contamination. | Stop leak if possible without personal risk. |

| Methods for Cleanup                                    | Other Information |
|--|-------------------|
| Evacuate area, stop leak. Contact emergency personnel. | None              |

## Section 7: Handling and Storage

| Handling   | Storage   |
|--|---|
| Store and handle in accordance with all current regulations and standards. Store below 49 C. Avoid shock. Store in a well-ventilated area. Store in a tightly closed container. Keep away from heat, sparks and flame. Store in a cool, dry place. Subject to storage regulation: U.S. OSHA 29 CFR 1910.101. | Keep separated from incompatible substances. Secure to prevent tipping. |

## Section 8: Exposure Controls/Personal Protection

| Exposure Guidelines |
|---------------------|
|---------------------|

**Exposure Guidelines**

SULFUR HEXAFLUORIDE: 1000 ppm (6000 mg/m<sup>3</sup>) OSHA TWA 1000 ppm ACGIH TWA 1000 ppm (6000 mg/m<sup>3</sup>) NIOSH recommended TWA 10 hour(s)

**Engineering Controls**

Handle only in fully enclosed systems.

| Eye Protection  | Skin Protection                      | Respiratory Protection   |
|---|--------------------------------------|--|
| Wear splash resistant safety goggles with a face shield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area. | Protective clothing is not required. | Respiratory protection may be needed for frequent or heavy exposure. Any self-contained breathing apparatus with a full facepiece. |

**General Hygiene considerations**

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

**Section 9: Physical and Chemical Properties**

| Physical State | Appearance | Color     | Change in Appearance | Physical Form | Odor     | Taste |
|----------------|------------|-----------|----------------------|---------------|----------|-------|
| Gas            | Clear      | Colorless | N/A                  | Gas           | Odorless | N/A   |

| Flash Point   | Flammability  | Partition Coefficient | Autoignition Temperature | Upper Explosive Limits | Lower Explosive Limits |
|---------------|---------------|-----------------------|--------------------------|------------------------|------------------------|
| Not flammable | Not available | 1.68 (log = 0.226)    | Nonflammable             | Nonflammable           | Nonflammable           |

| Boiling Point | Freezing Point    | Vapor Pressure    | Vapor Density | Specific Gravity | Water Solubility | pH             | Odor Threshold | Evaporation Rate | Viscosity        |
|---------------|-------------------|-------------------|---------------|------------------|------------------|----------------|----------------|------------------|------------------|
| Not available | -58.9 F (-50.5 C) | 16548 mmHg @ 20 C | 5.1 (Air=1)   | 1.68             | Slightly soluble | Not applicable | Not available  | Not applicable   | 0.0156 cP @ 25 C |

| Molecular Weight | Molecular Formula | Density | Weight per Gallon | Volatility by Volume | Volatility | Solvent Solubility  |
|------------------|-------------------|---------|-------------------|----------------------|------------|---|
| 146.06           | F6-S              | 0.3847  | Not available     | 1                    | 1          | Soluble: Alcohol, ether, potassium hydroxide solutions, transformer oil |

**Section 10: Stability and Reactivity**

| Stability                                   | Conditions to Avoid                         | Incompatible Materials                             |
|---|---|--|
| Stable at normal temperatures and pressure. | Stable at normal temperatures and pressure. | Combustible materials, metals, oxidizing materials |

| Hazardous Decomposition Products   | Possibility of Hazardous Reactions |
|--|------------------------------------|
| Fluorinated compounds, oxides of sulfur, sulfur compounds, hydrogen fluoride, hydrogen sulfide | Will not polymerize.               |

**Section 11: Toxicology Information****Acute Effects**

| Oral LD50     | Dermal LD50   | Inhalation   |
|---------------|---------------|--|
| Not available | Not available | Nausea, vomiting, difficulty breathing, dizziness, fatigue, emotional disturbances, tingling sensation, suffocation, convulsions, coma |

| Eye Irritation                                | Skin Irritation                               | Sensitization        |
|---|---|----------------------|
| No information on significant adverse effects | No information on significant adverse effects | Difficulty breathing |

**Chronic Effects**

| Carcinogenicity | Mutagenicity  | Reproductive Effects | Developmental Effects |
|-----------------|---------------|----------------------|-----------------------|
| Not available   | Not available | Not available        | No data               |

## Section 12: Ecological Information

### Fate and Transport

| Eco toxicity  | Persistence / Degradability | Bioaccumulation / Accumulation | Mobility in Environment                                      |
|---|-----------------------------|--------------------------------|--|
| Fish toxicity: Not available<br>Invertebrate toxicity: Not available<br>Algal toxicity: Not available<br>Phyto toxicity: Not available<br>Other toxicity: Not available | Highly volatile from water. | Not available                  | Leaches through the soil or the sediment at a moderate rate. |

## Section 13: Disposal Considerations

Dispose in accordance with all applicable regulations.

## Section 14: Transportation Information

### U.S. DOT 49 CFR 172.101

| Proper Shipping Name | ID Number | Hazard Class or Division | Packing Group  | Labeling Requirements | Passenger Aircraft or Railcar Quantity Limitations | Cargo Aircraft Only Quantity Limitations | Additional Shipping Description |
|----------------------|-----------|--------------------------|----------------|-----------------------|--|--|---------------------------------|
| Sulfur hexafluoride  | UN1080    | 2.2                      | Not applicable | 2.2                   | 75 kg or L   | 150 kg                                   | N/A                             |

### Canadian Transportation of Dangerous Goods

| Shipping Name       | UN Number | Class | Packing Group / Risk Group |
|---------------------|-----------|-------|----------------------------|
| Sulfur hexafluoride | UN1080    | 2.2   | Not applicable             |

## Section 15: Regulatory Information

### U.S. Regulations

| CERCLA Sections | SARA 355.30    | SARA 355.40    |
|-----------------|----------------|----------------|
| Not regulated.  | Not regulated. | Not regulated. |

### SARA 370.21

| Acute | Chronic | Fire | Reactive | Sudden Release |
|-------|---------|------|----------|----------------|
| Yes   | Yes     | No   | No       | Yes            |

### SARA 372.65

Not regulated.

### OSHA Process Safety

Not regulated.

### State Regulations

#### CA Proposition 65

Not regulated.

### Canadian Regulations

#### WHMIS Classification

A.

### National Inventory Status

| US Inventory (TSCA)  | TSCA 12b Export Notification | Canada Inventory (DSL/NDSL) |
|----------------------|------------------------------|-----------------------------|
| Listed on inventory. | Not listed.                  | Not determined.             |

# Section 16: Other Information

|                              |
|------------------------------|
| <b>NFPA Rating</b>           |
| HEALTH=1 FIRE=0 REACTIVITY=0 |

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard