

November 21, 2018 Revised

**SAFETY DATA SHEET - SF6**

**1. IDENTIFICATION**

**PRODUCT NAME:** Sulfur Hexafluoride

**SYNONYMS:** SF6, Sulfur Hexafluoride, Sulfur (VI) Fluoride, Sulfuric Fluoride

**RECOMMENDED USE:** Electrical Insulator

**DISTRIBUTOR:** Hudson Technologies Company  
**ADDRESS:** PO Box 1541  
One Blue Hill Plaza  
Pearl River, NY 10965

**EMERGENCY PHONE:** 1- 800-501-4376  
**CHEMTREC PHONE:** 1-800-424-9300  
**INFORMATION PHONE:** 1-800-953-2244

**2. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW:** Colorless, odorless, volatile liquid. Non-flammable material. Contact with the liquid may cause frostbite. Overexposure to vapors by inhalation may cause dizziness and loss of concentration. At higher levels, central nervous system depression and cardiac arrhythmia may result from exposure. Vapors displace air and can cause asphyxiation in confined spaces. At higher temperatures, (>250°C), decomposition products may include Hydrochloric Acid (HCL), Hydrofluoric Acid (HF) and carbonyl halides.

**HAZARD**

**CLASSIFICATION:** Gases Under Pressure  
USDOT Hazard Class 2.2, Non-Flammable Gas



**SIGNAL WORD:** WARNING

**HAZARD**

**STATEMENTS:** Gas under pressure; may explode if heated  
Harmful in contact with skin - may cause frostbite  
May displace oxygen and cause rapid suffocation. Inhalation of high concentrations of vapor is harmful and may cause heart irregularities, unconsciousness, or death.

November 21, 2018 Revised

## SAFETY DATA SHEET - SF6

### PRECAUTIONARY STATEMENTS

**PREVENTION:** Do not breathe vapors. Use only with adequate ventilation - never in a closed space. Wear protective gloves. Wear eye protection.

**RESPONSE:** If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a physician. If not breathing, give artificial respiration, preferably mouth to mouth.

If breathing is difficult, give oxygen. Avoid stimulants. Do not give adrenalin

If on skin: Wash with plenty of water (not hot water) or use other means to warm skin slowly.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician.

**STORAGE:** Protect from sunlight. Store in well-ventilated place.

Do not heat above 120°F (50°C). Do not store in damp areas.

**DISPOSAL:** Comply with Federal, State and local regulations. Reclaim by distillation or remove to a permitted waste disposal facility

**CARCINOGENICITY:** Ingredients found on one of the OSHA designated carcinogen lists are listed below.

INGREDIENT NAME

NTP STATUS

IARC STATUS

OSHA LIST

No ingredients listed in this section

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

**PRODUCT NAME:** Sulfur Hexafluoride

**SYNONYMS:** SF6, Sulfur Hexafluoride

**INGREDIENT NAME CAS NUMBER WEIGHT %**

Ingredient Name

Sulfur Hexafluoride (SF6)

CAS Number

2551-62-4

Trace impurities and additional material names not listed above may also appear in Section 15 toward the end of this Safety Data Sheet.

### 4. FIRST AID MEASURES

**SKIN:** Promptly flush skin with water until all chemical is removed. If there is evidence of frostbite, bathe (do not rub) with lukewarm (not hot) water. If water is not available, cover with a clean, soft cloth or similar covering. Get medical attention if symptoms persist.

**EYES:** Immediately flush eyes with large amounts of water for at least 15 minutes (in case of frostbite water should be lukewarm, not hot) lifting eyelids occasionally to facilitate irrigation. Get medical attention if symptoms persist.

## SAFETY DATA SHEET - SF6

**INGESTION:** Ingestion is unlikely because of the physical properties and is not expected to be hazardous. In case of accidental ingestion, get medical attention. Do not induce vomiting unless instructed to do so by a physician.

## 5. FIRE FIGHTING MEASURES

UPPER: N/A  
LOWER: N/A

## NFPA HAZARD CLASSIFICATION

FLAMMABILITY: 0

REACTIVITY: 2

OTHER:

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Cylinders may rupture under fire conditions. SF6 should not be permitted to mix with air above atmospheric pressure or at high temperatures, or in an oxygen enriched environment, since under such conditions it can become combustible in the presence of an ignition source.

## 6. ACCIDENTAL RELEASE MEASURES

**IN CASE OF SPILL OR OTHER RELEASE:**

(Always wear recommended personal protective equipment.)

Evacuate unprotected personnel. Protected personnel should remove ignition sources and shut off leak, if without risk, and provide ventilation. Use self-contained breathing apparatus (SCBA) for large spills or releases.

Unprotected personnel should not return until air has been tested and determined safe, including low-lying areas.

**Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.**

**SAFETY DATA SHEET - SF6****7. HANDLING AND STORAGE**

**NORMAL HANDLING:** Always wear recommended personal protective equipment.

Avoid breathing vapors and liquid contact with eyes, skin or clothing. Do not puncture or drop cylinders, expose them to open flame or excessive heat. Use authorized cylinders only. Follow standard safety precautions for handling and use of compressed gas cylinders. SF6 should not be mixed with air above atmospheric pressure for leak testing or any other purpose.

**STORAGE RECOMMENDATIONS:**

Store in a cool, well-ventilated area of low fire risk and keep out of direct sunlight. Protect cylinder and its fittings from physical damage. Storage in subsurface locations should be avoided. Close valve tightly after use and when empty. Cylinder temperatures should not exceed 52° C (125° F).

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** Provide local ventilation at filling zones and areas where leakage is probable. Mechanical (general) ventilation may be adequate for other operating and storage areas.

**PERSONAL PROTECTIVE EQUIPMENT**

**SKIN PROTECTION:** Skin contact with refrigerant may cause frostbite. General work clothing and gloves (leather) should provide adequate protection. If prolonged contact with the liquid or gas is anticipated, insulated gloves constructed of PVA, neoprene or butyl rubber should be used. Any contaminated clothing should be promptly removed and washed before reuse.

**EYE PROTECTION:** For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear chemical safety goggles.

**RESPIRATORY PROTECTION:** None generally required for adequately ventilated work situations. For accidental release or non-ventilated situations, or release into confined space, where the concentration may be above the PEL of 1,000 ppm, use a self-contained, NIOSH- approved breathing apparatus or supplied air respirator. For escape: use the former or a NIOSH-approved gas mask with organic vapor canister.

**ADDITIONAL RECOMMENDATIONS:** Where contact with liquid is likely, such as in a spill or leak, impervious boots and clothing should be worn. High dose-level warning signs are recommended for areas of principle exposure. Provide eyewash stations and quick-drench shower facilities at convenient locations. For tank cleaning operations, see OSHA regulations, 29 CFR 1910.132 and 29 CFR 1910.133.

**EXPOSURE GUIDELINES**

<u>INGREDIENT NAME</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER LIMIT</u>
Sulfur Hexafluoride	1000 ppm 8 hrs.	1000 ppm 8 hrs	*1000 ppm 10 hrs

\*NIOSH REL

November 21, 2018 Revised

## SAFETY DATA SHEET - SF6

### OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:

Hydrogen Fluoride: ACGIH TLV: 3 ppm ceiling

## 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear, colorless liquified gas
ODOR:	odorless
PHYSICAL STATE:	liquified gas
BOILING POINT (@ 736 mm Hg):	F: -82.7 / C: -63.7
VAPOR PRESSURE (psia):	298 @ 70°F (21.1°C)
VAPOR DENSITY (AIR = 1):	.385 lbs/ft³ @ 68°F (20°C)
SPECIFIC GRAVITY (H2O = 1):	5.11 @ 68°F (20°C)
EVAPORATION RATE (CCL4 =1):	NA
SOLUBILITY IN WATER (@ 14.7 psia):	0.001 WT% @ 77F (25C)
PERCENT SOLIDS BY WEIGHT:	Gas
PERCENT VOLATILE:	100% By Wt
VOLATILE ORGANIC COMPOUNDS (VOC):	Gas

## 10. STABILITY AND REACTIVITY

### NORMALLY STABLE (CONDITIONS TO AVOID):

The product is stable.

Do not mix with oxygen or air above atmospheric pressure. Any source of high temperature, such as lighted cigarettes, flames, hot spots or welding may yield toxic and/or corrosive decomposition products.

### INCOMPATIBILITIES:

No additional information available.

### HAZARDOUS DECOMPOSITION PRODUCTS:

Under normal conditions of storage and use, hazardous decomposition products should be produced

### HAZARDOUS POLYMERIZATION:

Will not occur.

## 11. TOXICOLOGICAL INFORMATION

### IMMEDIATE (ACUTE) EFFECTS:

Not available

### DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:

Not available

### OTHER DATA:

Not available

November 21, 2018 Revised

## SAFETY DATA SHEET - SF6

### 12. ECOLOGICAL INFORMATION

**Toxicity:** No ecological damage caused by this product

**Degradability (BOD):** SF6 is a gas at room temperature; therefore, it is unlikely to remain in water.

**Bioaccumulative potential:** Log Pow – 1.68

### 13. DISPOSAL CONSIDERATIONS

**RCRA** - Not a hazardous waste.

#### OTHER DISPOSAL CONSIDERATIONS:

Disposal must comply with federal, state, and local disposal or discharge laws. SF6 is subject to U.S. Environmental Protection Agency Clean Air Act Regulations Section 608 in 40 CFR Part 82 regarding refrigerant recycling.

**The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.**

### 14. TRANSPORT INFORMATION

<b>HAZARD CLASS:</b>	2.2
<b>ID NUMBER:</b>	UN1080
<b>SHIPPING NAME:</b>	Sulfur Hexafluoride
<b>PACKING GROUP:</b>	N/A
<b>LABEL STATEMENT:</b>	NONFLAMMABLE GAS
<b>SHIPPING CONTAINERS:</b>	Tank Cars, cylinders, ton tanks

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

### 15. REGULATORY INFORMATION

#### TOXIC SUBSTANCES CONTROL ACT (TSCA)

**TSCA INVENTORY STATUS:** Components listed on the TSCA inventory

**OTHER TSCA ISSUES:** None

#### SARA TITLE III / CERCLA

“Reportable Quantities” (RQs) and/or “Threshold Planning Quantities” (TPQs) exist for the following ingredients.

<u>INGREDIENT NAME</u>	<u>SARA / CERCLA RQ (lb.)</u>	<u>SARA EHS TPQ (lb.)</u>
No ingredients listed in this section		

November 21, 2018 Revised

## SAFETY DATA SHEET - SF6

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

**SECTION 311 HAZARD CLASS:** IMMEDIATE PRESSURE

### SARA 313 TOXIC CHEMICALS:

The following ingredients are SARA 313 "Toxic Chemicals". CAS numbers and weight percents are found in Section 3.

<u>INGREDIENT NAME</u>	<u>COMMENT</u>
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No ingredients listed in this section	
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### STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 3, the following are listed for state right-to-know purposes.

<u>INGREDIENT NAME</u>	<u>WEIGHT %</u>	<u>COMMENT</u>
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No ingredients listed in this section		
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### ADDITIONAL REGULATORY INFORMATION:

SF6 is subject to U.S. Environmental Protection Agency Clean Air Act Regulations at 40 CFR Part 82.

### WARNING:

**Do not vent** to the atmosphere. To comply with provisions of the U.S. Clean Air Act, any residual must be recovered.

**Sulfur Hexafluoride (SF6)** is a greenhouse gas which may contribute to global warming.

**California Prop. 65:** This product does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

## 16. OTHER INFORMATION

**DISCLAIMER:** The above information is based upon technical information believed to be accurate but does not purport to all-inclusive and should be used only as a guide. Hudson Technologies Company shall not be held liable for any damage from handling or from contact with this product. No warranty of merchantability or any warranty, express or implied is made with respect to such information