

MATERIAL
SAFETY
DATA SHEET

PRODUCT NAME Sulfur Hexafluoride	CAS# 2551-62-4
TRADE NAME AND SYNONYMS Sulfur Hexafluoride	DOT I.D. NO. UN 1080
CHEMICAL NAME AND SYNONYMS Sulfur Hexafluoride	DOT HAZARD CLASS Division 2.2 (Non-flammable Gas)
ISSUE DATE AND REVISIONS Revised March 2007	FORMULA SF ₆

HEALTH HAZARD DATA

<p>EMERGENCY OVERVIEW</p> <p>Sulfur Hexafluoride is an odorless, colorless non-flammable, nontoxic gas. It is readily liquefied and is shipped in steel cylinders as a liquefied gas under its own vapor pressure of 2210 kPa (320 psig) at 21.1 °C. Cylinder temperature should not exceed 125°F (52 °C).</p>
<p>SYMPTOMS OF OVER-EXPOSURE</p> <p>High concentrations of Sulfur Hexafluoride can cause an oxygen-deficient environment. Individuals breathing such an atmosphere may experience symptoms which include headaches, ringing in ears, dizziness, drowsiness, unconsciousness, nausea, vomiting, and depression of all the senses. Death may occur under some circumstances of over-exposure.</p>
<p>TOXICOLOGICAL PROPERTIES</p> <p>Sulfur Hexafluoride may be harmful. It can cause rapid suffocation. Exposure can cause nausea, dizziness and headache. At high concentrations, Sulfur Hexafluoride can act as an asphyxiant by the exclusion of oxygen.</p>
<p>RECOMMENDED FIRST AID TREATMENT</p> <p>PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE TO SULFUR HEXAFLUORIDE. RESCUERS SHOULD BE EQUIPPED WITH ADEQUATE PERSONAL PROTECTIVE APPARATUS.</p> <p><u>Inhalation:</u> Victim(s) should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. Further treatment should be symptomatic and supportive.</p> <p><u>Ingestion:</u> Wash out mouth with water provided person is conscious. Call for medical treatment.</p>

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES

None

PHYSICAL DATA

SUBLIMATION POINT -63.7°C	CRITICAL TEMPERATURE 45.5°C
MOLAR SPECIFIC HEAT (25 oC, 1 bar abs, constant pressure) 97.152 J/mol°K	CRITICAL PRESSURE 37.59 bar abs
SOLUBILITY IN WATER Soluble	SPECIFIC VOLUME(21.1 °C, 1 bar abs) 156.1 dm ³ /kg
EVAPORATION RATE N/A	SPECIFIC GRAVITY (AIR=1) 5.11 at 70°F
APPEARANCE AND ODOR Colorless, odorless gas	

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) N/A	AUTO IGNITION TEMPERATURE N/A	FLAMMABLE LIMITS % BY VOLUME LEL N/A UEL N/A
EXTINGUISHING MEDIA Nonflammable.		
SPECIAL FIRE FIGHTING PROCEDURES Structural fire-fighters must wear Self-Contained Breathing Apparatus and full protective equipment. In the event of fire, cool containers of this product with water to prevent failure. Use a water spray or fog to reduce of direct vapors.		
UNUSUAL FIRE AND EXPLOSION HAZARDS Toxic fumes emit under fire conditions.		

REACTIVITY DATA

STABILITY		CONDITIONS TO AVOID
Unstable		N/A
Stable	X	
INCOMPATIBILITY (Materials to avoid) Strong Oxidizing agents		
HAZARDOUS DECOMPOSITION PRODUCTS Sulfur Oxides and Hydrogen Fluoride		
HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID
May Occur		N/A
Will Not Occur	X	

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Uncontrolled releases should be responded by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of an accidental release, evacuate all personnel upwind and away from affected area, protect people, and respond with trained personnel.
WASTE DISPOSAL METHOD CAUTION: NO-RETURN CYLINDER. Waste disposal must be in accordance with appropriate Federal, State, and local regulations. For emergency disposal assistance, contact HSG for specific advice.

SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type) Positive pressure air line with mask or self-contained breathing apparatus should be available for emergency use.	
VENTILATION See Local Exhaust	SPECIAL N/A
MECHANICAL (Gen.) N/A	OTHER N/A
LOCAL EXHAUST To prevent accumulation of high concentrations so as to reduce the oxygen level in the air to less than 19.5 percent.	
PROTECTIVE GLOVES Any material	
EYE PROTECTION Safety goggles or glasses	
OTHER PROTECTIVE EQUIPMENT Safety shoes	

SPECIAL PRECAUTIONS*

SPECIAL LABELING INFORMATION DOT Shipping Name: Sulfur Hexafluoride DOT Shipping Label: Nonflammable Gas	DOT Hazard Class: Division 2.2 I.D. No.: UN 1080
SPECIAL WORK AND HYGIENE RECOMMENDATIONS As with all chemicals, avoid getting this product in you. Do not eat or drink while handling this product. Be aware of any signs of dizziness or fatigue, exposures to fatal concentrations of this product could occur without any significant warning symptoms.	
SPECIAL HANDLING AND STORAGE RECOMMENDATIONS Cylinders should be stored in dry, well-ventilated areas away from sources of heat, compressed gases can present significant safety hazards. Store containers away from heavily trafficked areas and emergency exits. Do not use this product with Disilane as it explodes on contact.	
OTHER RECOMMENDATIONS OR PRECAUTIONS Protect cylinders against physical damage. Store in cool, dry, well-ventilated area, away from sources of heat, ignition and direct sunlight. Do not allow area where cylinders are stored to exceed 125°F. Use a check valve or trap in the discharge line to prevent hazardous backflow. Cylinders should be stored upright and be firmly secured to prevent falling or being knocked over.	

Information contained in this material safety data sheet is offered without charge for use by technically qualified personnel at their discretion and risk. All statements, technical information and recommendations contained herein are based on tests and data which we believe to be reliable, but the accuracy or completeness thereof is not guaranteed no warranty of any kind is made with respect thereto. This information is not intended as a license to operate under or a recommendation to practice or infringe any patent of this Company or others covering any process, composition of matter or use.

Since the Company shall have no control of the use of the product described herein, the Company assumes no liability for loss or damage incurred from the proper or improper use of such product.