

MATERIAL
SAFETY
DATA SHEET

PRODUCT NAME Sulfur Hexafluoride	CAS # 2551-62-4
TRADE NAME AND SYNONYMS Sulfur Hexafluoride (D.O.T.)	DOT I.D. No.: UN 1080
	DOT Hazard Class: Division 2.2
CHEMICAL NAME AND SYNONYMS Sulfur Hexafluoride	Formula SF ₆
	Chemical Family: Inorganic Fluoride
ISSUE DATES AND REVISIONS Revised January 2006	

HEALTH HAZARD DATA

<p>TIME WEIGHTED AVERAGE EXPOSURE LIMIT 1,000 Molar PPM (ACGIH 1994-1995). OSHA 1993 PEL (8 Hr. TWA) = 1,000 Molar PPM.</p>
<p>SYMPTOMS OF EXPOSURE Effects of exposure to high concentrations so as to displace the oxygen in the air necessary for life are headache, dizziness, labored breathing and eventual unconsciousness.</p>
<p>TOXICOLOGICAL PROPERTIES Sulfur hexafluoride is nontoxic, but the liberation of a large amount in a confined area could displace the amount of oxygen in air necessary to support life.</p> <p>Sulfur hexafluoride is not listed in the IARC, NTP or by OSHA as a carcinogen or potential carcinogen</p> <p>Persons in ill health where such illness would be aggravated by exposure to sulfur hexafluoride should not be allowed to work or handle this product</p>
<p>RECOMMENDED FIRST AID TREATMENT PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE TO SULFUR HEXAFLUORIDE. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS.</p> <p>_____</p>

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Sulfur Hexafluoride

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES

Disilane explodes violently on contact with sulfur hexafluoride.

Electrical arcing in the presence of oxygen will break down sulfur hexafluoride yielding toxic thionyl fluoride

PHYSICAL DATA

BOILING POINT Sublimation point = -82.8°F (63.8°C)	LIQUID DENSITY AT BOILING POINT See Page 4
VAPOR PRESSURE @ 70°F (21.1°C) = critical Above the temperature of -181.1°F (-118.4°C)	GAS DENSITY AT 70°F, 1 atm @68°F (20°C) = .3847 lb/ft ³ (6.162 kg/m ³)
SOLUBILITY IN WATER Very slightly	FREEZING POINT -59.4°F (-50.8°C)
EVAPORATION RATE N/A (Gas)	SPECIFIC GRAVITY (AIR=1) @ 70°F (21.1°C)
APPEARANCE AND ODOR Colorless, odorless gas. Liquid is clear, pale blue and odorless	

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) N/A	AUTO IGNITION TEMPERATURE N/A	FLAMMABLE LIMITS % BY VOLUME (See Page 4) LEL N/A UEL N/A
EXTINGUISHING MEDIA Nonflammable, inert gas		ELECTRICAL CLASSIFICATION Nonhazardous
SPECIAL FIRE FIGHTING PROCEDURES If Cylinders are involved in a fire, safely relocate or keep cool with water spray.		
UNUSUAL FIRE AND EXPLOSION HAZARDS None		

REACTIVITY DATA

STABILITY Unstable		CONDITIONS TO AVOID None
Stable	X	
INCOMPATIBILITY (Materials to avoid) None		
HAZARDOUS DECOMPOSITION PRODUCTS See Page 4		
HAZARDOUS POLYMERIZATION May Occur		CONDITIONS TO AVOID
Will Not Occur	X	None

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Evacuate all personnel from affected area. Use appropriate protective equipment. if leak is in user's equipment, be certain to purge piping with an inert gas prior to attempting repairs. if leak is in container or container valve, contact your closest supplier location or call the emergency telephone number listed herein.
WASTE DISPOSAL METHOD Do not attempt to dispose of waste or unused quantities. Return in the shipping container <u>properly labeled, with any valve outlet plugs or caps secured and valve protection cap in place</u> to your supplier. For emergency disposal assistance, contact your closest supplier location or call the emergency telephone listed herein.

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 Hood with forced ventilation	LOCAL EXHAUST To prevent accumulation above the TWA	SPECIAL	N/A
	MECHANICAL (Gen.) N/A	OTHER	N/A
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 Hazard Class: Division 2.2
DOT Shipping Label: Nonflammable	I.D. No. UN 1080
SPECIAL HANDLING RECOMMENDATIONS	
Use only in well-ventilated areas. Valve protection caps must remain in place unless container is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure reducing regulator when connecting cylinder to lower pressure (<700 PSIG) piping or systems. The cylinder shall not be exposed to temperatures exceeding 125°F (52°C). Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder.	
For additional recommendations, consult Compressed Gas Associations Pamphlets P-9, P-14, and Safety Bulletin SB-2	
SPECIAL STORAGE RECOMMENDATIONS	
Protect cylinders from physical damage. Store in cool, dry, well-ventilated area away from heavily trafficked areas and emergency exists. Do not allow the temperature where cylinders are stored to exceed 125°F (52°C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in - First out" inventory system to prevent full cylinders being stored for excessive periods of time.	
For additional recommendations, consult Compressed Gas Associations Pamphlets P-9, P-14, and Safety Bulletin SB-2	
SPECIAL PACKAGING RECOMMENDATIONS	
At normal temperatures, sulfur hexafluoride is noncorrosive and may be used with any other common structural material. (See Hazardous Decomposition Products)	
OTHER RECOMMENDATIONS OR PRECAUTIONS	
Compressed gas cylinders should not be refilled except by qualified producers of compressed gases. Shipment of a compressed gas cylinder which has not been filled by the owner or with his (written) consent is a violation of Federal Law (49CFR).	
(Continued on Page 4)	

*Various Government Agencies (i.e. Department of Transportation, Occupational Safety and Health Administration, Food and Drug Administration and others) may have specific regulations concerning the transportation, handling, storage or use of this product which will not be reflected in this data sheet. The customer should review these regulations to ensure that he is in full compliance.

PHYSICAL DATA:

LIQUID DENSITY AT BOILING POINT:

Liquid at vapor liquid equilibrium @ 59°F (15°C) = 89.83 lb/Ft³ (1439 Kg/m³)

SPECIAL PRECAUTIONS

OTHER RECOMMENDATIONS OR PRECAUTIONS:

Always secure cylinders in an upright position before transporting them. NEVER transport cylinders in trunks of vehicles, enclosed vans, truck cabs or in passenger compartments. Transport cylinders secured in open flatbed or in open pick-up type vehicles.

Reporting under SARA, Title III, Section 313 not required.

NFAP 704 No. for Sulfur Hexafluoride = 1 0 0 none