
MATERIAL SAFETY DATA SHEET SF₆

Section 1 Material Identification

Chemical Name: Sulfur hexafluoride
Chemical Formula: SF₆
Chemical Family: Inorganic fluoride
Concorde Specialty Gases Inc.
36 Eaton Road
Eatontown, NJ 07724
In Case of Emergency: Call Chemtrec at 800-424-9300
Updated: December 2006

Section 2 Hazardous Ingredients

Exposure Limits (PPM)
Component Concentration ACGIH
TLV OSHA
PEL Other
Sulfur hexafluoride 100% 1000 1000

Section 3 Physical Data

Boiling Point (°F): -82.7 sublimation pt.
Vapor Pressure @ 21.1°C: 22.77atm
Vapor Density (AIR = 1): 5.11
Solubility in Water cm³ /Kg H₂O: 5.40
Specific Gravity (H₂O = 1) @ -50°C: 1.91
Percent, Volatile by volume (%): N/A
Evaporation Rate (_____ = 1): N/A
Appearance and Odor: Colorless, odorless gas

Section 4 Fire and Explosion Hazard Data

Flash Point and Method Flammable Limits LEL UEL
Nonflammable N/A
Extinguishing Media: Use what is appropriate for surrounding fire.
Special fire fighting procedures: Wear self-contained breathing apparatus and full protective clothing. If possible, move cylinders from fire area.
Unusual fire and explosion hazards: Cylinders exposed to heat or flame may vent rapidly or explode.

Section 5 Reactivity Data

Stability: Stable under normal storage conditions
Incompatibility (Materials to Avoid): Disilane (Si₂H₆)

Hazardous Decomposition Products: SF₂, S₂F₂, SF₄, S₂F₁₀

Hazardous Polymerization: Will not occur

Section 6 Health Hazard Data

Routes of Entry: Inhalation

Effects of over exposure (Acute): Inhalation can cause asphyxiation. Symptoms include nausea, headache, dizziness, fatigue, accelerated pulse rate, and eventual unconsciousness. May irritate eyes and skin. (CHRONIC): None (MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE): None

Carcinogenicity - NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? NO

Emergency and first aid: Inhalation - Immediately remove victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.

Section 7 Spill or Leak Procedures

Steps to be Taken: Evacuate and ventilate area. Remove sources of heat. Leak can be detected by standard fluorocarbon detecting device. Decomposition products of SF₆ may be absorbed on a 50/50 mixture of soda lime and activated alumina.

Remove leaking containers outdoors.

Waste Disposal Method: Return cylinders to suppliers for proper disposal with any valve outlet plugs or caps secured and valve protection cap in place.

Section 8 Special Protection Information

Respiratory Protection (Specify Type): Use a self-contained breathing apparatus in case of emergency or non-routine use.

Ventilation: Provide adequate general and local exhaust ventilation

Other protective equipment: Protective gloves for handling liquid, safety glasses, safety shoes for handling cylinders.

Section 9

Precautions to be taken in handling and storing: Store in cool, dry, well-ventilated areas away from flammable or explosive materials. Avoid moisture contact. Subject to temperatures no high than 130°F or lower than -20°F. Keep valve protection cap on cylinders when not in use and secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.

Other precautions: Protect containers from physical damage. Do not deface cylinders or labels. Move cylinder with adequate hand truck. Qualified producers or compressed gases should refill cylinders. 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). In case of emergency, contact Concorde for special instructions.