ELECTRONIC FLUOROCARBONS, LLC

Safety Data Sheet

Material Name: SULFUR HEXAFLUORIDE

* * *Section 1 - IDENTIFICATION* * *

Manufacturer Information

Electronic Fluorocarbons,LLC
3266 Bergey Road Hatfield
PA 19440

General Information: 215-443-9600
Emergency #: 1-800-535-5053 (Infotrac)
Outside the US: 1-352-323-3500

Product Identifier: SULFUR HEXAFLUORIDE

Trade Names/Synonyms

SULFUR FLUORIDE; SULPHUR HEXAFLUORIDE; ELEGAS; UN 1080; F6S; RTECS: WS4900000

Chemical Family

inorganic, gas

Product Use

industrial

Restrictions on Use

None known.

* * *Section 2 - HAZARDS IDENTIFICATION* * *

GHS Classification

Gas under pressure, Liquefied gas

GHS LABEL ELEMENTS

Symbol(s)

Signal Word

WARNING

Hazard Statement(s)

Contains gas under pressure; may explode if heated

Precautionary Statement(s)

Protect from sunlight. Store in a well-ventilated place.

* * *Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS* * *

CAS#	Component	Percent
2551-62-4	SULFUR HEXAFLUORIDE	100

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Fluorides.

* * *Section 4 - FIRST AID MEASURES* * *

Inhalation

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.

Skin

If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105-115 F; 41-46 C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blankets. Get immediate medical attention.

Eyes

Flush eyes with plenty of water.

Ingestion

If a large amount is swallowed, get medical attention.

Note to Physicians

For inhalation, consider oxygen.

Symptoms: Immediate

suffocation

Symptoms: Delayed

No data available.

* * *Section 5 - FIRE FIGHTING MEASURES* * *

See Section 9 for Flammability Properties

Specific Hazards Arising from the Chemical

Negligible fire hazard. Containers may rupture or explode if exposed to heat.

Extinguishing Media

carbon dioxide, regular dry chemical

Large fires: Use regular foam or flood with fine water spray.

Unsuitable Extinguishing Media

None known.

Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Fire Fighting Measures

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck, evacuation radius: 800 meters (1/2 mile). Use extinguishing agents appropriate for surrounding fire. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Do not get water directly on material. Reduce vapors with water spray. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Consider downwind evacuation if material is leaking.

Hazardous Combustion Products

Combustion: fluorinated compounds, oxides of sulfur, sulfur compounds, hydrogen fluoride, hydrogen sulfide

* * *Section 6 - ACCIDENTAL RELEASE MEASURES* * *

Personal Precautions

Wear personal protective clothing and equipment, see Section 8.

Environmental Precautions

Avoid release to the environment.

Methods for Containment

Reduce vapors with water spray. Eliminate all ignition sources if safe to do so. Keep unnecessary people away, isolate hazard area and deny entry.

Cleanup Methods

Ventilate closed spaces before entering. Damaged cylinders should be handled only by specialists.

* * *Section 7 - HANDLING AND STORAGE* * *

Handling Procedures

Avoid breathing gas. Use only with adequate ventilation.

Storage Procedures

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 separated from incompatible substances. Secure to prevent tipping. Keep away from heat, sparks and flame. Store in a cool, dry place. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101.

Incompatibilities combustible materials, metals, oxidizing materials

* * *Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION* * *

Component Exposure Limits

SULFUR HEXAFLUORIDE (2551-62-4)

ACGIH: 1000 ppm TWA
OSHA (Final): 1000 ppm TWA; 6000 mg/m3 TWA
OSHA (Vacated): 1000 ppm TWA; 6000 mg/m3 TWA
NIOSH: 1000 ppm TWA; 6000 mg/m3 TWA

Component Biological Limit Values

SULFUR HEXAFLUORIDE (2551-62-4)

ACGIH: 2 mg/L Medium: urine Time: prior to shift Parameter: Fluoride (background, nonspecific); 3 mg/L Medium: urine Time: end of shift Parameter: Fluoride (background, nonspecific, related to Fluorides)

Engineering Controls

Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Eyes/Face

For the gas: Eye protection not required, but recommended. For the liquid: Wear splash resistant safety goggles. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Protective Clothing

For the gas: Protective clothing is not required. For the liquid: Wear appropriate protective, cold insulating clothing.

Glove Recommendations

Wear insulated gloves.

Protective Materials

leather

Respiratory Protection

Under conditions of frequent use or heavy exposure, respiratory protection may be needed.
Respiratory protection is ranked in order from minimum to maximum.
Consider warning properties before use.

For Unknown Concentrations or Immediately Dangerous to Life or Health -

Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

* * *Section 9 - PHYSICAL AND CHEMICAL PROPERTIES* * *

Physical State:	Gas	**Appearance:**	Not available
Color:	colorless	**Physical Form:**	gas
Odor:	odorless	**Odor Threshold:**	Not available
pH:	Not available	**Melting/Freezing Point:**	-50.5 °C
Boiling Point:	63.9 °C @101.3 kPa	**Flash Point:**	not flammable
Decomposition:	Not available	**Evaporation Rate:**	Not available
Vapor Pressure:	16548 mmHg @ 20 °C	**Henry's Law Constant:**	4.52
Vapor Density (air = 1):	5.1	**Specific Gravity (water=1):**	1.68
Water Solubility:	slightly soluble	**KOW:**	47.867
Log KOW:	see Section 12	**KOC:**	195 (estimated)
Auto Ignition:	Not available	**Viscosity:**	0.0156 cP @25 °C
Sublimation Point:	-63.9 °C	**Volatility:**	100 %
Volatility by Volume:	100 %	**Molecular Weight:**	146.06
Molecular Formula:	F6-S		

Solvent Solubility

Soluble: alcohol, ether, potassium hydroxide solutions, transformer oil

Slightly Soluble: ethanol

Insoluble: hydrochloric acid, ammonia

* * *Section 10 - STABILITY AND REACTIVITY* * *

Chemical Stability

Stable at normal temperatures and pressure.

Conditions to Avoid

Protect from physical damage and heat. Containers may rupture or explode if exposed to heat.

Possibility of Hazardous Reactions

Will not polymerize.

Incompatible Materials

combustible materials, metals, oxidizing materials

Hazardous Decomposition

Combustion: fluorinated compounds, oxides of sulfur, sulfur compounds, hydrogen fluoride, hydrogen sulfide

* * *Section 11 - TOXICOLOGICAL INFORMATION* * *

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and no selected endpoints have been identified.

RTECS Acute Toxicity (selected)

The components of this material have been reviewed and RTECS publishes no data as of the date on this document.

Immediate Effects

suffocation

Delayed Effects

No data available.

Irritation/Corrosivity Data

No human or animal test data available.

RTECS Irritation

The components of this material have been reviewed and RTECS publishes no data as of the date on this document.

Respiratory Sensitizer

No data available.

Dermal Sensitizer

No data available.

Carcinogenicity

Component Carcinogenicity

SULFUR HEXAFLUORIDE (2551-62-4)

ACGIH: A4 - Not Classifiable as a Human Carcinogen (related to Fluorides)

Mutagenic Data

No data available.

Reproductive Effects Data

No data available.

Tumorigenic Data

No data available.

Specific Target Organ Toxicity - Single Exposure

simple asphyxiant

Specific Target Organ Toxicity - Repeated Exposure

No data available.

Aspiration Hazard

Not applicable.

Medical Conditions Aggravated by Exposure

None known.

* * *Section 12 - ECOLOGICAL INFORMATION* * *

Component Analysis - Aquatic Toxicity

No LOLI ecotoxicity data are available for this product's components.

Persistence and Degradability

No data available.

Bioaccumulative Potential

No data available.

Mobility in Environmental Media

No data available.

* * *Section 13 - DISPOSAL CONSIDERATIONS* * *

Disposal Methods

Dispose in accordance with all applicable regulations.

Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

* * *Section 14 - TRANSPORT INFORMATION* * *

US DOT Information

Shipping Name: Sulfur hexafluoride
UN/NA #: UN1080 **Hazard Class:** 2.2
Required Label(s): 2.2

IMDG Information

Shipping Name: Sulphur hexafluoride
UN #: UN1080 **Hazard Class:** 2.2

* * *Section 15 - REGULATORY INFORMATION* * *

Component Analysis

U.S. Federal Regulations

None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA 311/312 Hazardous Categories

Acute Health: Yes **Chronic Health:** No **Fire:** No **Pressure:** Yes **Reactive:** No

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
SULFUR HEXAFLUORIDE	2551-62-4	Yes	Yes	Yes	Yes	Yes

Not regulated under California Proposition 65

Component Analysis - Inventory

Component	CAS	US	CA	EU	AU	PH	JP	KR	CN	NZ
SULFUR HEXAFLUORIDE	2551-62-4	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes

* * *Section 16 - OTHER INFORMATION* * *

NFPA Ratings: Health: 1 **Fire:** 0 **Reactivity:** 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe