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## **1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

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**TAIYU INDUSTRIAL GASES Limited**  
16/F, Kowloon building,  
555 Nathan Road, Mongkok  
Kowloon,  
Hong Kong  
TELEPHONE NUMBER: (852)22979277

Chengdu Taiyu Industrial Gases Co.,Ltd  
Chengluo Avenue, Longquan District,  
Chengdu City, China (Mainland)  
TELEPHONE NUMBER: (86) 28-88455212(commonly)

**SUBSTANCE: SULFUR HEXAFLUORIDE**

**TRADE NAMES/SYNONYMS:**

MTG MSDS 81; SULFUR FLUORIDE; SULPHUR HEXAFLUORIDE; ELEGAS; UN 1080; F6S;  
MAT22300; RTECS WS4900000

**CHEMICAL FAMILY:** inorganic, gas

**CREATION DATE:** Jan 24 1989

**REVISION DATE:** Dec 15 20

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## **2. COMPOSITION, INFORMATION ON INGREDIENTS**

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**COMPONENT:** SULFUR HEXAFLUORIDE  
**CAS NUMBER:** 2551-62-4  
**PERCENTAGE:** 100.0

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## **3. HAZARDS IDENTIFICATION**

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**NFPA RATINGS (SCALE 0-4):** HEALTH=1 FIRE=0 REACTIVITY=0

**EMERGENCY OVERVIEW:**

**COLOR:** colorless

**PHYSICAL FORM:** gas

**ODOR:** odorless

**MAJOR HEALTH HAZARDS:** difficulty breathing

**PHYSICAL HAZARDS:** Containers may rupture or explode if exposed to heat.

**POTENTIAL HEALTH EFFECTS:**

**INHALATION:**

**SHORT TERM EXPOSURE:** nausea, vomiting, difficulty breathing, dizziness, fatigue, emotional

disturbances, tingling sensation, suffocation, convulsions, coma

**LONG TERM EXPOSURE:** no information on significant adverse effects

**SKIN CONTACT:**

**SHORT TERM EXPOSURE:** no information on significant adverse effects

**LONG TERM EXPOSURE:** no information is available

**EYE CONTACT:**

**SHORT TERM EXPOSURE:** no information on significant adverse effects

**LONG TERM EXPOSURE:** no information is available

**INGESTION:**

**SHORT TERM EXPOSURE:** no information on significant adverse effects

**LONG TERM EXPOSURE:** no information is available

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**4. FIRST AID MEASURES**

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**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 CONTACT:** Wash exposed skin with soap and water.

**EYE CONTACT:** Flush eyes with plenty of water.

**INGESTION:** If a large amount is swallowed, get medical attention.

**NOTE TO PHYSICIAN:** For inhalation, consider oxygen.

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**5. FIRE FIGHTING MEASURES**

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**FIRE AND EXPLOSION HAZARDS:** 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.

**FIRE FIGHTING:** 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.

**FLASH POINT:** not flammable

**HAZARDOUS COMBUSTION PRODUCTS:**

Thermal decomposition products or combustion: fluorinated compounds, oxides of sulfur, sulfur compounds, hydrogen fluoride, hydrogen sulfide.

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**6. ACCIDENTAL RELEASE MEASURES**

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**OCCUPATIONAL RELEASE:**

Stop leak if possible without personal risk. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.

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**7. HANDLING AND STORAGE**

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**STORAGE:** 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.

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**8. EXPOSURE CONTROLS, PERSONAL PROTECTION**

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**EXPOSURE LIMITS:****SULFUR HEXAFLUORIDE:**

1000 ppm (6000 mg/m<sup>3</sup>) OSHA TWA

1000 ppm ACGIH TWA

1000 ppm (6000 mg/m<sup>3</sup>) NIOSH recommended TWA 10 hour(s)

**VENTILATION:** Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

**EYE PROTECTION:** Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**CLOTHING:** Protective clothing is not required.

**GLOVES:** Wear appropriate chemical resistant gloves.

**PROTECTIVE MATERIAL TYPES:** leather

**RESPIRATOR:** 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 full face piece and operated in a pressure-demand or other positive-pressure

mode in combination with a separate escape supply.

Any self-contained breathing apparatus with a full face piece.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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**PHYSICAL STATE:** gas

**COLOR:** colorless

**ODOR:** odorless  
**MOLECULAR WEIGHT:** 146.06  
**MOLECULAR FORMULA:** F6-S  
**BOILING POINT:** Not available  
**FREEZING POINT:** -58.9 F (-50.5 C)  
**SUBLIMATION POINT:** -83 F (-63.8 C)  
**VAPOR PRESSURE:** 16548 mmHg @ 20 C  
**VAPOR DENSITY (air=1):** 5.1  
**SPECIFIC GRAVITY (water=1):** 1.68  
**WATER SOLUBILITY:** slightly soluble  
**PH:** Not applicable  
**VOLATILITY:** 100%  
**VOLATILITY BY VOLUME:** 100%  
**ODOR THRESHOLD:** Not available  
**EVAPORATION RATE:** Not applicable  
**VISCOSITY:** 0.0156 cP @ 25 C  
**COEFFICIENT OF WATER/OIL DISTRIBUTION:** Not applicable  
**SOLVENT SOLUBILITY:**  
**Soluble:** alcohol, ether, potassium hydroxide solutions, transformer oil  
**Slightly Soluble:** ethanol  
**Insoluble:** hydrochloric acid, ammonia

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## 10. STABILITY AND REACTIVITY

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**REACTIVITY:** Stable at normal temperatures and pressure.

**CONDITIONS TO AVOID:** Protect from physical damage and heat. Containers may rupture or explode if exposed to heat.

**INCOMPATIBILITIES:** combustible materials, metals, oxidizing materials

**HAZARDOUS DECOMPOSITION:**

Thermal decomposition products or combustion: fluorinated compounds, oxides of sulfur, sulfur compounds, hydrogen fluoride, hydrogen sulfide

**POLYMERIZATION:** Will not polymerize.

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## 11. TOXICOLOGICAL INFORMATION

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**SULFUR HEXAFLUORIDE:**

**ACUTE TOXICITY LEVEL:** Insufficient Data.

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## 12. ECOLOGICAL INFORMATION

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**FATE AND TRANSPORT:**

**KOW:** 1.68 (log = 0.226)

**KOC:** 195 (log = 2.29) estimated

**HENRY'S LAW CONSTANT:** 4.5

**ENVIRONMENTAL SUMMARY:** Leaches through the soil or the sediment at a moderate rate.

Highly volatile from water.

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### **13. DISPOSAL CONSIDERATIONS**

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Dispose in accordance with all applicable regulations.

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### **14. TRANSPORT INFORMATION**

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**U.S. DOT 49 CFR 172.101:**

**PROPER SHIPPING NAME:** Sulfur hexafluoride

**ID NUMBER:** UN1080

**HAZARD CLASS OR DIVISION:** 2.2

**LABELING REQUIREMENTS:** 2.2

**CANADIAN TRANSPORTATION OF DANGEROUS GOODS:**

**SHIPPING NAME:** Sulfur hexafluoride

**UN NUMBER:** UN1080

**CLASS:** 2.2

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### **15. REGULATORY INFORMATION**

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**U.S. REGULATIONS:**

**CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):** Not regulated.

**SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30):** Not regulated.

**SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.40):** Not regulated.

**SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):**

ACUTE: Yes

CHRONIC: Yes

FIRE: No

REACTIVE: No

SUDDEN RELEASE: Yes

**SARA TITLE III SECTION 313 (40 CFR 372.65):** Not regulated.

**OSHA PROCESS SAFETY (29CFR1910.119):** Not regulated.

**STATE REGULATIONS:**

**California Proposition 65:** Not regulated.

**CANADIAN REGULATIONS:**

**WHMIS CLASSIFICATION:** A.

**NATIONAL INVENTORY STATUS:**

**U.S. INVENTORY (TSCA):** Listed on inventory.

**TSCA 12(b) EXPORT NOTIFICATION:** Not listed.

**CANADA INVENTORY (DSL/NDL):** Not determined

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## 16. OTHER INFORMATION

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