|  |  |
| --- | --- |
| Metro Welding Supply Corp. logo | Safety Data Sheet  Silicon Tetrafluoride |
|  |

# Section 1: Product and Company Identification

**Metro Welding Supply Corp.**

12620 Southfield Road
  
Detroit, MI 48223
  
(313) 834-1660 [phone]
  
(313) 835-3562 [fax]
  
http://www.metrowelding.com/

Product Code: Silicon Tetrafluoride

# Section 2: Hazards Identification



**Danger**

## Hazard Classification:

Acute Gas Inhale Toxicity (Category 3)

Aspiration Hazard (Category 1)

Corrosive To Metal (Category 1)

Eye Effects (Category 1)

Gases Under Pressure

## Hazard Statements:

Causes serious eye damage

Contains gas under pressure; may explode if heated

May be corrosive to metals

May be fatal if swallowed and enters airways

Toxic if inhaled

## Precautionary Statements

**Prevention:**

Wear eye protection/face protection.

Use only outdoors or in a well-ventilated area.

Avoid breathing dust/fume/gas/mist/ vapors/spray.

Keep only in original container.

[In case of inadequate ventilation] wear respiratory protection.

**Response:**

Immediately call a poison center or doctor.

Do NOT induce vomiting.

Absorb spillage to prevent material damage.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

**Storage:**

Store in a well-ventilated place. Keep container tightly closed.

Protect from sunlight.

Store locked up.

Store in corrosive resistant container with a resistant inner liner.

**Disposal:**

Dispose of contents and/or container in accordance with applicable regulations.

# Section 3: Composition/Information on Ingredients

| CAS # |
| --- |
| 7783-61-1 |

| Chemical Substance | Chemical Family | Trade Names |
| --- | --- | --- |
| SILICON TETRAFLUORIDE | silicone/siloxane | SILANE, TETRAFLUORO-; TETRAFLUOROSILANE; SILICON FLUORIDE; PERFLUOROSILANE; SILICON TETRAFLUORIDE (SiF4); SILICON FLUORIDE (SiF4); UN 1859; F4Si |

# Section 4: First Aid Measures

| Skin Contact | Eye Contact | Ingestion | Inhalation | Note to Physicians |
| --- | --- | --- | --- | --- |
| Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get immediate medical attention. Thoroughly clean and dry contaminated clothing before reuse. Destroy contaminated shoes. | Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention. | If swallowed, drink plenty of water, DO NOT induce vomiting. Get immediate medical attention. | 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. | For inhalation, consider oxygen. For skin contact, consider ice water bath, iced alcohol, iced magnesium sulfate, magnesium oxide/ glycerin gels, calcium gluconate gel or benzalkonium chloride solution. Avoid gastric lavage or emesis. |

# Section 5: Fire Fighting Measures

| Suitable Extinguishing Media | Products of Combustion | Protection of Firefighters |
| --- | --- | --- |
| Carbon dioxide, regular dry chemical Large fires: Use regular foam or flood with fine water spray. | Water or Moisture: acids, hydrogen fluoride | * Any self-contained breathing apparatus with a full facepiece. * Any self-contained breathing apparatus with a full facepiece. |

# Section 6: Accidental Release Measures

| Personal Precautions | Environmental Precautions | Methods for Containment |
| --- | --- | --- |
| Keep unnecessary people away, isolate hazard area and deny entry. Do not touch spilled material. | Prevent environmental contamination. Discard according to applicable regulations. | Stop leak if possible without personal risk. Reduce vapors with water spray. |

| Methods for Cleanup | Other Information |
| --- | --- |
| Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Large spills: Dike for later disposal. | None |

# Section 7: Handling and Storage

| Handling | Storage |
| --- | --- |
| Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Store below 52 C. Store in cool, dry place. Store in a well-ventilated area. | Keep separated from incompatible substances. |

# Section 8: Exposure Controls/Personal Protection

| Exposure Guidelines |
| --- |
| SILICON TETRAFLUORIDE: 2.5 mg(F)/m3 OSHA TWA 2.5 mg(F)/m3 ACGIH TWA 2.5 mg(F)/m3 NIOSH recommended TWA 10 hour(s). |

## Engineering Controls

Handle only in fully enclosed systems.

| Eye Protection | Skin Protection | Respiratory Protection |
| --- | --- | --- |
| Wear splash resistant safety goggles with a face shield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area. | Wear appropriate chemical resistant clothing. | Any self-contained breathing apparatus with a full facepiece. |

## General Hygiene considerations

* Avoid breathing vapor or mist
* Avoid contact with eyes and skin
* Wash thoroughly after handling and before eating or drinking

# Section 9: Physical and Chemical Properties

| Physical State | Appearance | Color | Change in Appearance | Physical Form | Odor | Taste |
| --- | --- | --- | --- | --- | --- | --- |
| Gas | Clear | Colorless | N/A | Gas | Irritating odor, pungent odor | N/A |

| Flash Point | Flammability | Partition Coefficient | Autoignition Temperature | Upper Explosive Limits | Lower Explosive Limits |
| --- | --- | --- | --- | --- | --- |
| Not flammable | Not available | Not available | Nonflammable | Nonflammable | Nonflammable |

| Boiling Point | Freezing Point | Vapor Pressure | Vapor Density | Specific Gravity | Water Solubility | pH | Odor Threshold | Evaporation Rate | Viscosity |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -123 F (-86 C) | -130 F (-90 C) | Not available | 3.63 (Air=1) | 1.7 @ -95 C | Decomposes | Acidic in solution | Not available | Not applicable |  |

| Molecular Weight | Molecular Formula | Density | Weight per Gallon | Volatility by Volume | Volatility | Solvent Solubility |
| --- | --- | --- | --- | --- | --- | --- |
| 104.09 | F4-Si | 0.266 | Not available | Not available | Not applicable | Soluble: Absolute alcohol, hydrofluoric acid |

# Section 10: Stability and Reactivity

| Stability | Conditions to Avoid | Incompatible Materials |
| --- | --- | --- |
| Reacts violently with water, releasing toxic gases. Releases corrosive gases. | Reacts violently with water, releasing toxic gases. Releases corrosive gases. | Acids, alcohols, bases, metal salts, metals, oxidizing materials |

| Hazardous Decomposition Products | Possibility of Hazardous Reactions |
| --- | --- |
| Acids, hydrogen fluoride | Will not polymerize. |

# Section 11: Toxicology Information

## Acute Effects

| Oral LD50 | Dermal LD50 | Inhalation |
| --- | --- | --- |
| LC50 Inhalation Gas. Rat 4544 ppm 1 hours | Not available | Burns |

| Eye Irritation | Skin Irritation | Sensitization |
| --- | --- | --- |
| Burns | Burns | Respiratory tract burns, skin burns, eye burns, mucous membrane burns |

## Chronic Effects

| Carcinogenicity | Mutagenicity | Reproductive Effects | Developmental Effects |
| --- | --- | --- | --- |
| ACGIH: A4 -Not Classifiable as a Human Carcinogen (Fluorides) | Not available | Not available | No data |

# Section 12: Ecological Information

## Fate and Transport

|  |  |  |  |
| --- | --- | --- | --- |
| Eco toxicity | Persistence / Degradability | Bioaccumulation / Accumulation | Mobility in Environment |
| Fish toxicity: Not available  Invertibrate toxicity: Not available  Algal toxicity: Not available  Phyto toxicity: Not available  Other toxicity: Not available | Not available | Not available | Not available |

# Section 13: Disposal Considerations

|  |
| --- |
| Dispose in accordance with all applicable regulations. |

# Section 14: Transportation Information

## U.S. DOT 49 CFR 172.101

| Proper Shipping Name | ID Number | Hazard Class or Division | Packing Group | Labeling Requirements | Passenger Aircraft or Railcar Quantity Limitations | Cargo Aircraft Only Quantity Limitations | Additional Shipping Description |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Silicon tetrafluoride | UN1859 | 2.3 | Not applicable | 2.3; 8 | Forbidden | Forbidden | Toxic-Inhalation Hazard Zone B |

## Canadian Transportation of Dangerous Goods

|  |  |  |  |
| --- | --- | --- | --- |
| Shipping Name | UN Number | Class | Packing Group / Risk Group |
| Silicon tetrafluoride, compressed | UN1859 | 2.3; 8 | Not applicable |

# Section 15: Regulatory Information

## U.S. Regulations

|  |  |  |
| --- | --- | --- |
| CERCLA Sections | SARA 355.30 | SARA 355.40 |
| Not regulated. | Not regulated. | Not regulated. |

## SARA 370.21

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Acute | Chronic | Fire | Reactive | Sudden Release |
| Yes | Yes | No | Yes | Yes |

## SARA 372.65

|  |
| --- |
| Not regulated. |

## OSHA Process Safety

|  |
| --- |
| Not regulated. |

## State Regulations

|  |
| --- |
| CA Proposition 65 |
| Not regulated. |

## Canadian Regulations

|  |
| --- |
| WHMIS Classification |
| AD1E |

## National Inventory Status

|  |  |  |
| --- | --- | --- |
| US Inventory (TSCA) | TSCA 12b Export Notification | Canada Inventory (DSL/NDSL) |
| Listed on inventory. | Not listed. | Not determined. |

# Section 16: Other Information

|  |
| --- |
| NFPA Rating |
| HEALTH=3 FIRE=0 REACTIVITY=2 |

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard