**Section 1 - IDENTIFICATION**

Manufacturer Information

MATHESON TRI-GAS, INC.
150 Allen Road, Suite 302
Basking Ridge, NJ 07920

General Information: 1-800-416-2505
Emergency #: 1-800-424-9300 (CHEMTREC)
Outside the US: 703-527-3887 (Call collect)

Product Identifier: SILICON TETRACHLORIDE

Trade Names/Synonyms
MTG MSDS 149; SILICON CHLORIDE; TETRACHLOROSILANE; TETRACHLOROSILICON

Chemical Family
inorganic, silicon, halides

Product Use
industrial

Restrictions on Use
None known.

**Section 2 - HAZARDS IDENTIFICATION**

GHS Classification
Corrosive to metals, Category 1
Skin corrosion/irritation, Category 1
Eye damage/irritation, Category 1
Specific Target Organ Toxicity - Single Exposure, Category 1 (lungs)

GHS LABEL ELEMENTS
Symbol(s)

Signal Word
DANGER

Hazard Statement(s)
May be corrosive to metals
Causes severe skin burns and eye damage
Causes damage to lungs.

Precautionary Statement(s)
Prevention
Keep only in the original container. Do not breathe vapor or mist. Wash thoroughly after handling. Wear protective gloves/clothing and eye/face protection. Do not eat, drink, or smoke when using this product.
**Response**

Absorb spillage to prevent material damage. IF exposed: Call a POISON CENTER or doctor/physician. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Specific treatment is urgent, see first aid section of Safety Data Sheet. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor/physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

**Storage**

Store in corrosive resistant container with a resistant inner liner. Store locked up.

**Disposal**

Dispose of in accordance with applications with applicable regulations.

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

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Component</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>10026-04-7</td>
<td>SILICON TETRACHLORIDE</td>
<td>100</td>
</tr>
</tbody>
</table>

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### **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**

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.

**Eyes**

Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

**Ingestion**

If swallowed, drink plenty of water, do NOT induce vomiting. Get immediate medical attention.

**Note to Physicians**

For inhalation, consider oxygen. Avoid gastric lavage or emesis.

**Symptoms: Immediate**

respiratory tract burns, skin burns, eye burns, mucous membrane burns, lung damage

**Symptoms: Delayed**

No information on significant adverse effects.

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

See Section 9 for Flammability Properties

**Specific Hazards Arising from the Chemical**

Negligible fire hazard.

**Extinguishing Media**

carbon dioxide, regular dry chemical, dry sand, alcohol resistant foam

Large fires: water spray or fog, alcohol-resistant foam

**Unsuitable Extinguishing Media**

Do not allow water to get in container.
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
Do not get water inside container. Do not scatter spilled material with high-pressure water streams. 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.

Hazardous Combustion Products
Combustion: hydrogen chloride, oxides of silicon

** *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
Stop leak if possible without personal risk. Do not touch spilled material. Keep unnecessary people away, isolate hazard area and deny entry.

Cleanup Methods
Avoid contact with combustible materials. Reduce vapors with water spray. Do not get water directly on material. Ventilate closed spaces before entering. Damaged cylinders should be handled only by specialists.

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

Handling Procedures
Wash thoroughly after handling.

Storage Procedures
Store and handle in accordance with all current regulations and standards. Store locked up. Keep separated from incompatible substances.

Incompatibilities combustible materials, metals

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

Component Exposure Limits
SILICON TETRACHLORIDE (10026-04-7)
AIHA: 1 ppm Ceiling

Component Biological Limit Values
There are no biological limit values for any of this product's components.

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

PERSONAL PROTECTIVE EQUIPMENT

Eyes/Face
Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Protective Clothing
Wear appropriate chemical resistant clothing.

Glove Recommendations
Wear appropriate chemical resistant gloves.
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.

Any chemical cartridge respirator with acid gas cartridge(s).
Any chemical cartridge respirator with a full facepiece and acid gas cartridge(s).
Any air-purifying respirator with a full facepiece and an acid gas canister.

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: | Liquid |
| Color: | colorless |
| Odor: | irritating odor |
| pH: | Not available |
| Boiling Point: | 58 °C |
| Evaporation Rate: | Not available |
| Vapor Density (air = 1): | Not available |
| Water Solubility: | decomposes |
| Coeff. Water/Oil Dist: | Not available |
| Viscosity: | Not available |
| Molecular Formula: | Si-Cl4 |

**Section 10 - STABILITY AND REACTIVITY**

Chemical Stability

Reacts violently with water. Releases corrosive gases.

Conditions to Avoid

Avoid contact with combustible materials. Keep dry. Dangerous gases may accumulate in confined spaces. Keep out of water supplies and sewers.

Possibility of Hazardous Reactions

Will not polymerize.

Incompatible Materials

combustible materials, metals

Hazardous Decomposition

Water or Moisture: hydrogen chloride, siloxanes

Hazardous Decomposition

Combustion: hydrogen chloride, oxides of silicon
**Section 11 - TOXICOLOGICAL INFORMATION**

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

**SILICON TETRACHLORIDE (10026-04-7)**

- Inhalation LC50 Rat 8000 ppm 4 h

RTECS Acute Toxicity (selected)

The components of this material have been reviewed, and RTECS publishes the following endpoints:

**SILICON TETRACHLORIDE (10026-04-7)**

- Inhalation: 8000 ppm/4 hour Inhalation Rat LC50

Acute Toxicity Level

**SILICON TETRACHLORIDE (10026-04-7)**

- Slightly Toxic: Inhalation

Immediate Effects

- respiratory tract burns, skin burns, eye burns, mucous membrane burns, lung damage

Delayed Effects

- No information on significant adverse effects.

RTECS Irritation

The components of this material have been reviewed, and RTECS publishes the following endpoints:

**SILICON TETRACHLORIDE (10026-04-7)**

- 20 mg/24 hour Eyes Rabbit moderate; 500 mg/24 hour Skin Rabbit severe

Local Effects

**SILICON TETRACHLORIDE (10026-04-7)**

- Corrosive: Inhalation, skin, eye, ingestion

Respiratory Sensitizer

- No data available.

Dermal Sensitizer

- No data available.

Carcinogenicity

Component Carcinogenicity

- None of this product's components are listed by ACGIH, IARC, NTP, OSHA or DFG.

Mutagenic Data

- Negative results using bacteria and animal cells; no human data available.

RTECS Mutagenic

- The components of this material have been reviewed, and RTECS publishes data for one or more components.

Reproductive Effects Data

- No data available.

RTECS Tumorigenic

- The components of this material have been reviewed, and RTECS publishes data for one or more components.

Specific Target Organ Toxicity - Single Exposure

- respiratory system, lungs

Specific Target Organ Toxicity - Repeated Exposure

- No data available.

Aspiration Hazard

- No data available.
Medical Conditions Aggravated by Exposure
respiratory disorders, skin disorders, eye disorders

**Section 12 - ECOLOGICAL INFORMATION**

Component Analysis - Aquatic Toxicity
No LOLI ecotoxicity data are available for this product's components.

Persistence and Degradability
Readily hydrolyzes to form hydrogen chloride gas and hydrochloric acid.

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. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D003.

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: Silicon tetrachloride
UN/NA #: UN1818  Hazard Class: 8  Packing Group: II
Required Label(s): 8

IMDG Information
Shipping Name: Silicon tetrachloride
UN #: UN1818  Hazard Class: 8  Packing Group: II

**Section 15 - REGULATORY INFORMATION**

Component Analysis
U.S. Federal Regulations
None of this product's 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: No  Reactive: Yes

U.S. State Regulations
The following components appear on one or more of the following state hazardous substances lists:

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Not regulated under California Proposition 65
## Component Analysis - Inventory

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<td>Yes</td>
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### NFPA Ratings: Health: 3 Fire: 0 Reactivity: 2

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

### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RID - European Rail Transport; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

### Other Information

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End of Sheet MAT20750