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Material Safety Data Sheet

Trimethylsilyl Trifluoromethanesulfonate, 98%

Section 1 - Chemical Product and Company Identification

MSDS Name: Trimethylsilyl Trifluoromethanesulfonate 98%

Manufacturer/Supplier

Shanghai Transchem Technology Co., Ltd.

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China

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Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
27607-77-8	Trimethylsilyl Trifluoromethanesulfonate	98%	248-565-4

Section 3 - Hazards Identification

Classification of the GHS: PHYSICAL HAZARDS

Flammable liquids: Category 3

HEALTH HAZARDS:

Skin corrosion/irritation: Category 1B

Serious eye damage/eye irritation: Category 1 ENVIRONMENTAL HAZARDS: Not classified

GHS label elements:





Pictograms or hazard symbols
Signal word: Danger
Hazard statement:
Flammable liquid and vapour
Causes severe skin burns and eye damage



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Potential Health Effects

Eye: Causes eye burns. Skin: Causes skin burns.

Ingestion: May cause severe and permanent damage to the digestive tract. Causes gastrointestinal

tract burns.

Inhalation: May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. Causes chemical burns to the respiratory tract. Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Vapors may cause dizziness or suffocation.

Chronic: None

Section 4 - First Aid Measures

Eyes: Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).

Skin: Get medical aid immediately. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water.

Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor. Reacts violently with water. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT get water inside containers. Do NOT use straight streams of water.

Flash Point: 25 deg C (77.00 deg F)



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Autoignition Temperature: Not available.

Explosion Limits, Lower: N/A

Upper: N/A

NFPA Rating: (estimated) Health: 3; Flammability: 3; Instability: 2; Special Hazard: -W-

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8. **Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use only in a well-ventilated area. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Discard contaminated shoes. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Keep container closed when not in use. Store in a tightly closed container. Keep under a nitrogen blanket. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Trimethylsilyl Trifluoromethanesulfonate	none listed	6 mg/m3 TWA (listed under Silica, amorphous).3000 mg/m3 IDLH (listed under	none listed



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	Silica, amorphous).	

OSHA Vacated PELs: Trimethylsilyl Trifluoromethanesulfonate: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear a chemical apron. Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: clear slightly yellow

Odor: Not available. pH: Not available.

Vapor Pressure: Not available.

Vapor Density: 7.7

Evaporation Rate:Not available.

Viscosity: Not available.

Boiling Point: 140 deg C @ 76.00mm Hg **Freezing/Melting Point:**Not available.

Decomposition Temperature: Not available.

Solubility: reacts

Specific Gravity/Density: 1.1500g/cm3 **Molecular Formula:** C4H9F3O3SSi

Molecular Weight: 222.26

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.



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Conditions to Avoid: Incompatible materials, ignition sources, excess heat, exposure to moist air or water.

Incompatibilities with Other Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide, oxides of sulfur, carbon dioxide, hydrogen

fluoride gas, silicon dioxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

Acute Toxicity: No data available

Skin corrosion/irritation: No data available Serious eye damage/irritation: No data available Germ cell mutagenicity: No data available

Carcinogenicity:

IARC= No data available NTP= No data available

Reproductive toxicity: No data available

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available. **Environmental:** Rapidly volatilizes into the atmosphere.

Physical: No information available. **Other:** No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed. RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG	
Shipping Name:	CORROSIVE LIQUIDS, FLAMMABLE, N.O.S.	FLAMMABLE LIQUID CORROSIVE NOS	



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		(TRIMETHYLSILTRIFLORMETHSULF)
Hazard Class:	8	3(8)
UN Number:	UN2920	UN2924
Packing Group:	II	III
Additional Info:		FP25

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 27607-77-8 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313 No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 27607-77-8 can be found on the following state right to know lists: California, (listed as Silica, amorphous), New Jersey, (listed as Silica, amorphous), Pennsylvania, (listed as Silica, amorphous), Minnesota, (listed as Silica, amorphous), Massachusetts, (listed as Silica, amorphous).

California Prop 65



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California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

C

Risk Phrases:

R 10 Flammable.

R 34 Causes burns.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.

S 25 Avoid contact with eyes.

S 33 Take precautionary measures against static discharges.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 9 Keep container in a well-ventilated place.

WGK (Water Danger/Protection)

CAS# 27607-77-8: No information available.

Canada - DSL/NDSL

CAS# 27607-77-8 is listed on Canada's NDSL List.

Canada - WHMIS

not available.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 27607-77-8 (listed as Silica, amorphous) is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 6/9/2011

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.



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