Safety Data Sheet

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name | **Trichlorosilane**

Synonyms | Silicochloroform; Trichloromonosilane

CAS Number | 10025-78-2

Product Code | 20164

EC Number | 233-042-5

Molecular Formula | :H 1:Si 1:Cl 3:

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s) | Intermediate in the purification of silicon.

1.3 Details of the supplier of the safety data sheet

Manufacturer | Air Liquide

2700 Post Oak Blvd.
Houston, TX 77056
United States
www.us.airliquide.com
sds@airliquide.com

Telephone (Technical) | 713-896-2896

Telephone (Technical) | 800-819-1704

1.4 Emergency telephone number

Manufacturer | 800-424-9300 - CHEMTREC

Manufacturer | +1 703-527-3887 - Outside United States

Section 2: Hazards Identification

EU/EEC

According to Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]
According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP | Flammable Liquids 1 - H224
Pyrophoric Liquids 1 - H250
Compressed Gas - H280
Acute Toxicity Oral 4 - H302
Skin Corrosion 1A - H314
Acute Toxicity Inhalation 3 - H331

DSD/DPD | Extremely Flammable (F+)
Highly Flammable (F)
Harmful (Xn)
Corrosive (C)

R12, R14, R17, R20/22, R29, R35

2.2 Label Elements

CLP

DANGER

Hazard statements |
H224 - Extremely flammable liquid and vapour
H250 - Catches fire spontaneously if exposed to air
H280 - Contains gas under pressure; may explode if heated
H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H331 - Toxic if inhaled

Precautionary statements

Prevention |
P210 - Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.
P222 - Do not allow contact with air.
P233 - Keep container tightly closed.
P240 - Ground and/or bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting/equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe fume/gas/mist/vapours/spray.
P264 - Wash thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Response |
P370+P378 - In case of fire: Use appropriate media for extinction.
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P311 - Call a POISON CENTER or doctor/physician.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P321 - Specific treatment, see supplemental first aid information.
P363 - Wash contaminated clothing before reuse.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor/physician.
P301+P312 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician if you feel unwell.
P330 - Rinse mouth.
P331 - Do NOT induce vomiting.

Storage/Disposal |
P233 - Keep container tightly closed.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P422 - Store contents under appropriate liquid or inert gas - .
P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

DSD/DPD

Risk phrases |
R12 - Extremely flammable.
R14 - Reacts violently with water.
R17 - Spontaneously flammable in air.
R20/22 - Harmful by inhalation and if swallowed.
R29 - Contact with water liberates toxic gas.
R35 - Causes severe burns.

Safety phrases |
S8 - Keep container dry

S9 - Keep container in a well ventilated place
S16 - Keep away from sources of ignition - No Smoking.
S36 - Wear suitable protective clothing.
S37 - Wear suitable gloves.
S39 - Wear eye/face protection.
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3 Other Hazards

CLP | According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

DSD/DPD | According to European Directive 1999/45/EC this preparation is considered dangerous.

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012 | Flammable Liquids 1 - H224
Pyrophoric Liquids 1 - H250
In contact with water emits flammable gases 1 - H260
Compressed Gas - H280
Acute Toxicity Oral 4 - H302
Skin Corrosion 1A - H314
Serious Eye Damage 1 - H318
Acute Toxicity Inhalation 3 - H331

2.2 Label elements

OSHA HCS 2012

DANGER

Hazard statements | Extremely flammable liquid and vapour - H224
Catches fire spontaneously if exposed to air - H250
In contact with water releases flammable gases which may ignite spontaneously - H260
Contains gas under pressure; may explode if heated - H280
Harmful if swallowed - H302
Causes severe skin burns and eye damage - H314
Causes serious eye damage - H318
Toxic if inhaled - H331

Precautionary statements

Prevention | Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking. - P210
Do not allow contact with air. - P222
Handle under inert gas. Protect from moisture. - P231+P232
Keep container tightly closed. - P233
Ground and/or bond container and receiving equipment. - P240
Use explosion-proof electrical/ventilating/lighting/equipment. - P241
Use only non-sparking tools. - P242
Take precautionary measures against static discharge. - P243
Do not breathe fume/gas/mist/vapours/spray. - P260
Wash thoroughly after handling. - P264
Do not eat, drink or smoke when using this product. - P270
Use only outdoors or in a well-ventilated area. - P271
Wear protective gloves/protective clothing/eye protection/face protection. - P280
Do not allow contact with water.

Response | In case of fire: Use appropriate media for extinction. - P370+P378
Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. -

P335+P334
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. - P304+P340
Call a POISON CENTER or doctor/physician. - P311
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. - P303+P361+P353
Specific treatment, see supplemental first aid information. - P321
Wash contaminated clothing before reuse. - P363
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. - P305+P351+P338
Immediately call a POISON CENTER or doctor/physician. - P310
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician if you feel unwell. - P301+P312
Rinse mouth. - P330
Do NOT induce vomiting. - P331

Storage/Disposal | Keep container tightly closed. - P233
Store in a dry place. Store in a closed container. - P402+P404
Store in a well-ventilated place. Keep container tightly closed. - P403+P233
Store locked up. - P405
Store contents under appropriate liquid or inert gas - . - P422
Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. - P501

2.3 Other hazards

OSHA HCS 2012 | Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to WHMIS

2.1 Classification of the substance or mixture

WHMIS | Compressed Gas - A
Flammable Liquids - B2
Reactive Flammable Materials - B6
Very Toxic - D1A
Corrosive - E

2.2 Label elements

WHMIS

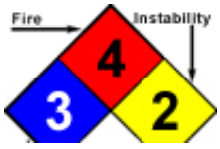
| Compressed Gas - A
Flammable Liquids - B2
Reactive Flammable Materials - B6
Very Toxic - D1A
Corrosive - E

2.3 Other hazards

WHMIS | In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

2.4 Other information

NFPA



Section 3 - Composition/Information on Ingredients

3.1 Substances

| Material does not meet the criteria of a substance in accordance with Regulation (EC) No 1272/2008.

3.2 Mixtures

Composition					
Chemical Name	**Identifiers**	**%**	**LD50/LC50**	**Classifications According to Regulation/Directive**	**Comments**
Trichlorosilane	**CAS:**10025-78-2 **EC Number:**233-042-5 **EU Index:**014-001-00-9	99.8%	Ingestion/Oral-Rat LD50 • 1030 mg/kg	**EU DSD/DPD:** Annex I - F+ R12 R14; F R17; Xn R20/22 R29; C R35 **EU CLP:** Annex VI - Flam. Liq. 1, H224; Pyr. Liq. 1, H250; Acute Tox. 3, H331; Acute Tox 4*, H302; Skin Corr. 1A, H314 **OSHA HCS 2012:** Water React. 1; Pyr. Liq. 1; Flam. Liq. 1; Skin Corr. 1A; Eye Dam. 1; Acute tox 4, Oral; Acute Tox 3, Inhalation	NDA
Maximum Impurities	NDA	0.02%	NDA	**EU DSD/DPD:** Not Classified **EU CLP:** Not Classified **OSHA HCS 2012:** Not Classified	NDA

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

| Administer oxygen if breathing is difficult. Do not use mouth-to-mouth method if victim inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Give artificial respiration if victim is not breathing. Move victim to fresh air.

Skin

| For minor skin contact, avoid spreading material on unaffected skin. In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Remove and isolate contaminated clothing.

Eye

| In case of contact with substance, immediately flush eyes with running water for at least 20 minutes.

Ingestion

| If swallowed, rinse mouth with water (only if the person is conscious) Do NOT induce vomiting. Do not use mouth-to-mouth method if victim ingested the substance. Obtain medical attention immediately if ingested.

4.2 Most important symptoms and effects, both acute and delayed

| Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician

| All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media	Use extinguishing agent suitable for type of surrounding fire. SMALL FIRES: Dry chemical or CO2.
Unsuitable Extinguishing Media	Water

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards	May be ignited by heat, sparks or flames. May ignite on contact with moist air or moisture. Containers may explode when heated or if contaminated with water. Produce flammable and toxic gases on contact with water. Some react vigorously or explosively on contact with water. May burn rapidly with flare-burning effect. Vapors may travel to source of ignition and flash back. May re-ignite after fire is extinguished. Cylinders exposed to fire may vent and release flammable gas through pressure relief devices. Ruptured cylinders may rocket. Runoff may create fire or explosion hazard.
Hazardous Combustion Products	The products of thermal decomposition of this material include amorphous silicon dioxide and hydrogen chloride.

5.3 Advice for firefighters

Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
Always wear thermal protective clothing when handling refrigerated/cryogenic liquids.
Wear positive pressure self-contained breathing apparatus (SCBA).
DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED
Move containers from fire area if you can do it without risk.
FIRE: If tank, rail car or tank truck is involved in a fire, ISOLATE for 1600 meters (1 mile) in all directions; also, consider initial evacuation for 1600 meters (1 mile) in all directions.
FIRE INVOLVING TANKS: ALWAYS stay away from tanks engulfed in fire.
FIRE INVOLVING TANKS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
FIRE INVOLVING TANKS: Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
FIRE INVOLVING TANKS: Cool containers with flooding quantities of water until well after fire is out.
FIRE INVOLVING TANKS: Do not direct water at source of leak or safety devices; icing may occur.
FIRE INVOLVING TANKS: For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions	Ventilate the area before entry. Do not walk through spilled material. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Emergency Procedures	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas.

6.2 Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures	Stop leak if you can do it without risk. SMALL SPILLS: Cover with DRY earth, DRY sand or other non-combustible material

followed with plastic sheet to minimize spreading or contact with rain.
SMALL SPILLS: Dike for later disposal; do not apply water unless directed to do so.

6.4 Reference to other sections

Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

Use only with adequate ventilation. Wear appropriate personal protective equipment, avoid direct contact. Do not breathe fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Avoid contact with heat and ignition sources and oxidizers. Use only non-sparking tools. Take precautionary measures against static charges. Use explosion-proof - electrical, ventilating and/or lighting equipment. Cylinders should be firmly secured to prevent falling or being knocked-over. Do not attempt to repair, adjust, or in any other way modify cylinders. If there is a malfunction or another type of operational problem, contact nearest distributor immediately. Empty containers retain product residue and can be hazardous. Do not cut, weld, puncture or incinerate container.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Handle and store under inert environment, preferably argon. Keep away from incompatible materials. Keep away from sources of ignition – No Smoking. Do not allow area where cylinders are stored to exceed 52C (125F). Containers of this material should be separated from oxygen, or other oxidizers, by a minimum distance of 20 ft., or by a barrier of non-combustible material at least 5 ft. high, having a fire-resistance rating of at least 0.5 hours. Isolate from other incompatible chemicals (refer to Section 10, Stability and Reactivity).

7.3 Specific end use(s)

Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines		
	Result	**China**
Trichlorosilane (10025-78-2)	Ceilings	3 mg/m3 Ceiling [MAC]

8.2 Exposure controls

Engineering Measures/Controls

This product should be used in a fume hood or glove box or closed chemical dispensing system designed by competent individual. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits provided in this section, if applicable. Use a non-sparking, grounded, explosion-proof ventilation system separate from other exhaust ventilation systems. Exhaust system in manner consistent with prevention of release to atmosphere. Use explosion-proof electrical/ventilating/lighting/equipment.

Personal Protective Equipment

Respiratory

In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

Wear face shield and eye protection.

Skin/Body

Wear leather gloves when handling cylinders. Wear chemically resistant gloves and clothing when using this product.

General Industrial Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly with soap and water after handling and before eating, drinking, or using

tobacco.

Environmental Exposure Controls

Follow best practice for site management and disposal of waste. Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

Key to abbreviations

MAC = Maximum Allowable Concentration

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	A colorless, fuming liquid with a sharp, choking odor.
Color	Colorless	Odor	Sharp, choking odor.
Odor Threshold	Data lacking		
General Properties			
Boiling Point	31.5 to 33 C(88.7 to 91.4 F)	Melting Point	-126.6 C(-195.88 F)
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	Data lacking	Water Solubility	Reacts
Viscosity	Data lacking	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	533 hPa @ 14.5 C(58.1 F)	Vapor Density	4.7 Air=1
Evaporation Rate	Data lacking		
Flammability			
Flash Point	-14 C(6.8 F) CC (Closed Cup)	UEL	90.5 %
LEL	1.2 %	Autoignition	104 C(219.2 F)
Flammability (solid, gas)	Data lacking		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

May ignite spontaneously in air. Reacts violently with water.

10.2 Chemical stability

Under normal atmospheric conditions of temperature, pressure, and humidity, spontaneous ignition of the vapors of Trichlorosilane will not normally occur (because of the rapid rate of hydrogen chloride formation)

10.3 Possibility of hazardous reactions

Vapors may form explosive mixtures with air. Reacts violently with water. Catches fire spontaneously if exposed to air.

10.4 Conditions to avoid

Excess heat, sparks, open flame. Moisture .

10.5 Incompatible materials

Trichlorosilane reacts violently with water. Trichlorosilane is incompatible with strong oxidizers, amines, and alcohols.

10.6 Hazardous decomposition products

Thermal decomposition products include carbon dioxide, carbon monoxide, phosgene, and hydrogen chloride.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
Trichlorosilane (99.8%)	10025-78-2	**Acute Toxicity:** Ingestion/Oral-Rat LD50 • 1030 mg/kg

GHS Properties	Classification
Acute toxicity	**EU/CLP** • Acute Toxicity - Inhalation 3; Acute Toxicity - Oral 4 **OSHA HCS 2012** • Acute Toxicity - Inhalation 3; Acute Toxicity - Oral 4
Aspiration Hazard	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Carcinogenicity	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Germ Cell Mutagenicity	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Skin corrosion/Irritation	**EU/CLP** • Skin Corrosion 1A **OSHA HCS 2012** • Skin Corrosion 1A
Skin sensitization	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
STOT-RE	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
STOT-SE	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Toxicity for Reproduction	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Respiratory sensitization	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Classification criteria not met
Serious eye damage/Irritation	**EU/CLP** • Classification criteria not met **OSHA HCS 2012** • Serious Eye Damage 1

Potential Health Effects

Inhalation

Acute (Immediate) Toxic if inhaled. May cause corrosive burns - irreversible damage.

Chronic (Delayed) Repeated or prolonged exposure to corrosive fumes may cause bronchial irritation with chronic cough.

Skin

Acute (Immediate) Causes severe skin burns and eye damage.

Chronic (Delayed) Repeated or prolonged exposure to corrosive materials will cause dermatitis.

Eye

Acute (Immediate) | Causes serious eye damage.

Chronic (Delayed) | Repeated or prolonged exposure to corrosive materials or fumes may cause conjunctivitis.

Ingestion

Acute (Immediate) | Harmful if swallowed. May cause irreversible damage to mucous membranes.

Chronic (Delayed) | Repeated or prolonged exposure to corrosive materials or fumes may cause gastrointestinal distrubances.

Key to abbreviations

LD = Lethal Dose

Section 12 - Ecological Information

12.1 Toxicity

| Material data lacking.

12.2 Persistence and degradability

| Material data lacking.

12.3 Bioaccumulative potential

| Material data lacking.

12.4 Mobility in Soil

| Material data lacking.

12.5 Results of PBT and vPvB assessment

| No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

| No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste | Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste | Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	UN1295	Trichlorosilane	3,4.3,8	I	NDA
TDG	UN1295	TRICHLOROSILANE	3,4.3,8	I	NDA
IMO/IMDG	UN1295	TRICHLOROSILANE	3,4.3,8	I	NDA
IATA/ICAO	NDA	Forbidden	NDA	NDA	NDA

14.6 Special precautions for | Cylinders should be transported in a secure position, in a well-ventilated vehicle. The

user transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious safety hazards. If transporting these cylinders in vehicles, ensure these cylinders are not exposed to extremely high temperatures (as may occur in an enclosed vehicle on a hot day). Additionally, the vehicle should be well-ventilated during transportation.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not relevant.

14.8 Other information

DOT | Forbidden for Passenger aircraft/rail transport and Cargo aircraft.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications | Acute, Chronic, Fire, Pressure(Sudden Release of), Reactive

State Right To Know				
Component	**CAS**	**MA**	**NJ**	**PA**
Trichlorosilane	10025-78-2	Yes	Yes	Yes

Inventory						
Component	**CAS**	**Canada DSL**	**Canada NDSL**	**China**	**EU EINECS**	**EU ELNICS**
Trichlorosilane	10025-78-2	Yes	No	Yes	Yes	Yes

Inventory (Con't.)		
Component	**CAS**	**TSCA**
Trichlorosilane	10025-78-2	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

• Trichlorosilane	10025-78-2	Not Listed

Canada - WHMIS - Ingredient Disclosure List

• Trichlorosilane	10025-78-2	1 %

Environment

Canada - CEPA - Priority Substances List

• Trichlorosilane	10025-78-2	Not Listed

China

Environment

China - Ozone Depleting Substances - First Schedule

• Trichlorosilane	10025-78-2	Not Listed

China - Ozone Depleting Substances - Second Schedule

• Trichlorosilane	10025-78-2	Not Listed

China - Ozone Depleting Substances - Third Schedule

• Trichlorosilane	10025-78-2	Not Listed

Other

China - Annex I & II - Controlled Chemicals Lists

• Trichlorosilane	10025-78-2	Not Listed

China - Dangerous Goods List

• Trichlorosilane	10025-78-2	

China - Export Control List - Part I Chemicals

• Trichlorosilane	10025-78-2	Not Listed

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

• Trichlorosilane	10025-78-2	F+; R12 R14 F; R17 Xn; R20/22 R29 C; R35

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

• Trichlorosilane	10025-78-2	10%<=C: Xn; R:20/22 10% <=C: C; R:35 5%<=C<10%: C; R:34 1%<=C<5%: Xi; R:36/37/38

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

• Trichlorosilane	10025-78-2	F+ C R:12-14-17-20/22-29-35 S:(2)-7/9-16-26-36/37/39-43-45

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

• Trichlorosilane	10025-78-2	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

• Trichlorosilane	10025-78-2	S:(2)-7/9-16-26-36/37/39-43-45

Germany

Environment

Germany - TA Luft - Types and Classes

• Trichlorosilane	10025-78-2	Not Listed

Germany - Water Classification (VwVwS) - Annex 1

• Trichlorosilane	10025-78-2	Not Listed

Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes

• Trichlorosilane	10025-78-2	ID Number 557, hazard class 1 - low hazard to waters (footnote 13)

Germany - Water Classification (VwVwS) - Annex 3

• Trichlorosilane	10025-78-2	Not Listed

Other

Germany - Specifically Regulated Chemicals in TRGS

• Trichlorosilane	10025-78-2	Not Listed

United Kingdom

Environment

United Kingdom - Pollution Inventory - Schedule 1 - Thresholds for Releases to Air

• Trichlorosilane	10025-78-2	Not Listed

Other

United Kingdom - Workplace Exposure Limits (WELs) - Substances in Review

• Trichlorosilane	10025-78-2	Not Listed

United Kingdom - List of Dangerous Substances in Water

• Trichlorosilane	10025-78-2	Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• Trichlorosilane	10025-78-2	5000 lb TQ

U.S. - OSHA - Specifically Regulated Chemicals

• Trichlorosilane	10025-78-2	Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• Trichlorosilane	10025-78-2	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Trichlorosilane	10025-78-2	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Trichlorosilane	10025-78-2	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Trichlorosilane	10025-78-2	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Trichlorosilane	10025-78-2	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Trichlorosilane	10025-78-2	Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• Trichlorosilane	10025-78-2	Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

• Trichlorosilane	10025-78-2	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Trichlorosilane	10025-78-2	Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Trichlorosilane	10025-78-2	Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Trichlorosilane	10025-78-2	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Trichlorosilane	10025-78-2	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Trichlorosilane	10025-78-2	Not Listed

United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

• Trichlorosilane	10025-78-2	Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

• Trichlorosilane	10025-78-2	Not Listed

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

Last Revision Date 19/December/2014

Preparation Date 19/December/2014

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Key to abbreviations

NDA = No data available