



Safety Data Sheet


Rev. 3

Page 1 of 6

Section 1 - Product and Company Identification

Product name : Silane
Other names : --
Product use : Transistor instrument implants; Manufacture of amorphous silica.
Supplier's name : San Fu Chemical Co., Ltd.
Supplier's address : 340 Hsiao Hsin Li, Shan-Hua District, Tainan City, Taiwan, R.O.C.
Supplier's phone : 886-6-5837608 Emergency phone : 886-6-5837608
FAX. : 886-6-5839498

Section 2 - Hazards Identification

Classification : <ol style="list-style-type: none">1. Flammable gases, Category 1A2. Gases under pressure : Liquefied gas3. Acute toxicity (inhalation: gas) Category 4
The Most Important Hazards and effect
Label element : <ul style="list-style-type: none">■ Hazard symbol : Flame, Gas cylinder, Exclamation mark ■ Signal word : Danger
Hazard statement : <ol style="list-style-type: none">1. Extremely flammable gas.2. Contains gas under pressure; may explode if heated.3. Harmful if inhaled.
Precautionary statement : <ol style="list-style-type: none">1. Avoid breathing dust/fume/gas/mist/vapours/spray.2. Use only outdoors or in a well-ventilated area.3. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.4. If inhaled: Remove person to fresh air and keep comfortable for breathing.5. Leaking gas fire: Do not extinguish, unless leak can be stopped safely.6. In case of leakage, eliminate all ignition sources.7. Call a poison centre or doctor if you feel unwell.8. Protect from sunlight. Store in a well-ventilated place.
Others Hazard : May ignite spontaneously if exposed to air.

Section 3 - Composition/Information On Ingredients

Pure Substance :

Chemical name : Silane
Synonyms : Silicon tetrahydride, Monosilane



Safety Data Sheet

Rev. 3

Page 2 of 6

CAS No. : 7803-62-5

Ingredient contributing to the hazard(%) : 100%

Section 4 - First Aid Measures

The First-aid Information :

- Inhalation : Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Perform cardiopulmonary resuscitation if breathing stopped.
- Skin Contact : In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistance.
- Eye Contact : Immediately flush eyes thoroughly with water for at least 15 minutes.
- Ingestion : Ingestion is not considered a potential route of exposure.

The Most Important Symptoms and Hazardous Effects : May cause headache, nausea and irritation of respiratory tract.

Protection of First-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

Notes to a Physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 5 - Fire Fighting Measures

Extinguishing Media : Water spray or fog. Dry powder. Shutting off the source of the gas is the preferred method of control.

Specific Hazards when Fire-fight : Exposure to fire may cause containers to rupture/explode. Escaping gas cannot be extinguished.

Specific Fire-fighting Procedure : If possible, stop flow of product. Use water spray or fog to knock down fire fumes if possible. Do not extinguish a leaking gas flame unless absolutely necessary. Spontaneous/explosive re-ignition may occur. Extinguish any other fire. Move containers away from the fire area if this can be done without risk.

Specific Protection of Firefighters : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus.

Section 6 - Accidental Release Measures

Personal Precautions :

1. For non-emergency personnel: Act in accordance with local emergency plan. Try to stop release. Evacuate area. Ensure adequate air ventilation. Stay upwind.
2. For emergency responders: Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

Environmental Precautions : Try to stop release.

Methods for Cleaning up : Ventilate area. Keep area evacuated and free from ignition sources until any spilled liquid has evaporated (ground free from frost). Dust deposited may be vacuum cleaned or the area hosed down with water.



Safety Data Sheet

Rev. 3

Page 3 of 6

Section 7 - Handling and Storage

Handling :

Put on appropriate personal protective equipment. Contains gas under pressure. Do not get in eyes or on skin or clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container.

Storage :

Do not store above the following temperature: 51.67°C (125°F). Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials. Eliminate all ignition sources. Keep container tightly closed and sealed until ready for use.

Section 8 - Exposure Controls & Personal Protection

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Control parameters

TWA	STEL	Ceiling	Biological standards
5ppm	10ppm	--	--

Personal protective equipment :

- Respiratory Protection : The gas can cause asphyxiation without warning by replacing the oxygen in the air. Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. If operating conditions cause high gas concentrations to be produced or any recommended or statutory exposure limit is exceeded, use an air-fed respirator or self-contained breathing apparatus.
- Hand Protection : Wear working gloves when handling gas containers.
- Eye Protection : Wear goggles and a face shield when transfilling or breaking transfer connections.
- Skin and Body Protection : Wear protective clothing include boots, gloves, lab coat, apron or overalls to prevent skin contact. Consider the use of flame resistant anti-static safety clothing.

Hygiene measures :

1. Take off contaminated clothing as soon as possible after work, wash it before wearing or discarding it again, and inform laundry staff of the hazards of contamination.
2. Smoking or eating is strictly prohibited in the workplace.
3. Wash hands thoroughly after handling this material.
4. Keep the workplace clean.

Section 9 - Physical & Chemical Properties

Appearance : Gas	Odor : Unpleasant
Color : Colorless	Melting Point: -185 °C



Safety Data Sheet

Rev. 3

Page 4 of 6

pH value : --	Boiling point/boiling range : -111 °C
Flammability: Extremely flammable gas	Flash point : Spontaneous combustion
Decomposition temp : --	Test method (Opened or Closed cup) : --
Auto ignition temp : -50 °C	Explosion properties : 1.4%~96%
Vapor pressure : >760mmHg	Vapor density : 1.11 (air = 1)
Density : --	Solubility : Insoluble
log Kow : --	Evaporation Rate : --

Section 10 - Stability & Reactivity Data

Stability : Stable under normal conditions.
Possible hazardous reactions under specific conditions : Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow gas to accumulate in low or confined areas.
Materials to avoid : Incompatible materials: Oxidizer, air
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11 - Toxicological Information

Route of exposure : Inhalation, skin contact.
Symptoms : Upper respiratory tract, eye irritation, headache, nausea, skin burning.
Immediate Toxicity : <ol style="list-style-type: none">1. Skin : Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.2. Inhalation : At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.3. Eye : Liquid can cause burns similar to frostbite.4. Ingestion : Ingestion of liquid can cause burns similar to frostbite.<ul style="list-style-type: none">● LD₅₀: --● LC₅₀: 9,600 ppm/4hour(s) (Rat, Inhalation)
Specific effects : --

Section 12 - Ecological Information

Ecotoxicology : <ul style="list-style-type: none">■ LC₅₀(fish) : --■ EC₅₀(Aquatic Invertebrates) : --■ Bioconcentration factor (BCF) : --



Safety Data Sheet

Rev. 3

Page 5 of 6

Persistence and degradability : --

- Half-Life (Air) : --
- Half-Life (Water surface) : --
- Half-Life (Groundwater) : --
- Half-Life (Soil) : --

Bioaccumulative potential : --

Mobility in soil : Because of its high volatility, the product is unlikely to cause ground or water pollution. Partition into soil is unlikely.

Other adverse effects : --

Section 13 - Disposal Considerations

Methods of disposal : Contact supplier if guidance is required. Do not discharge into areas where there is a risk of forming an explosive mixture with air. Waste gas should be flared through a suitable burner with flash back arrestor. Must not be discharged to atmosphere. Gases formed by combustion should be washed with water to remove silica. Ensure that the emission levels from local regulations or operating permits are not exceeded. Return unused product in original container to supplier.

Section 14 - SDS Transport Information

UN classification number : 2203

Proper D.O.T Shipping Name : SILANE

Hazard Class : 2.1 : Flammable gases.

Packing Group : --

Marine pollution : --

Specific precautionary transport measures and conditions : Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.

Section 15 - Regulatory Information

Regulations :

1. Occupational Safety and Health Law
2. Regulations on Occupational Safety and Health Facilities
3. High Pressure Gas Labor Safety Rules
4. Labeling and general knowledge rules for hazardous chemicals
5. Measures for the assessment and hierarchical management of hazardous chemicals
6. Road traffic safety rules
7. Standards and safety management measures for public dangerous goods and flammable high-pressure gases
8. Industrial waste storage, removal and treatment methods and facility standards



Safety Data Sheet

Rev. 3

Page 6 of 6

Section 16 - Other Information

Literature references	1. ChemWatch Database, 2017 2. REACH registration information on ECHA CHEM website 3. Classification suggestions for Japanese product parity technology base institutions	
Prepared by	Supplier : San Fu Chemical Co., Ltd.	
	Address : 340 Hsiao Hsin Li, Shan-Hua District, Tainan City, Taiwan, R.O.C.	
	Supplier's phone : 886-6-5837608	Supplier's phone : 886-6-5837608
	Name : Alan Lee	
Preparation date	Jan-10 st 2025	Revision : 3
Re-revision date	Jan-9 st 2028	
Remarks	Symbols Explanations: "--" No information is available at this time. "/" Not applicable to this substance.	
■ This information above has consulted national or international papers and manufacturer or supplier's provided information. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Users should make their own determination of the suitability of the information for their particular purposes.		