



MATERIAL SAFETY DATA SHEET

Chemtrec 24-Hour Emergency Telephone
Domestic North America (800) 424-9300
International (703) 527-3887

This MSDS complies with 29 CFR 1910.1200
(Hazard Communication)

1. Product and Supplier Identification / Product Hazard Summary

Product: [PRO SIL 1100 SILICONE CURING AGENT]
Product No: [28031024010, 28031024013, 28031024015]
Trade Name: [PRO SIL 1100 SILICONE CURING AGENT]
Supplier: Fiberlay Inc.
24 S. Idaho St.
Seattle, WA 98134
(206)782-0660

2. Composition

Component	CAS No.	%
Tetrapropoxy Silane	682-01-9	5-15
Ethyl Silicate	78-10-4	5-10
Dibutyl Tin Bisneodecanoate	68928-76-7	3-7
Dibutyl Tin Dilaurate	77-58-7	0.3-4

Composition Comments: All concentrations are in percent by weight unless ingredient is a gas.
Gas concentrations are in percent by volume

HMIS RATING: **FLAMMABILITY: 2** **REACTIVITY: 2** **HEALTH: 1**

3. Hazards Identification

Physical State: Liquid

Emergency Overview: WARNING!! Combustible liquid and vapor. Will be easily ignited by heat, spark or flames. Causes skin, eye and respiratory tract irritation. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Prolonged exposure may cause chronic effects.

OSHA Regulatory Status: This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential Health Effects

Routes of Exposure: Inhalation. Ingestion. Skin contact. Eye contact.

Eyes: Contact with eyes may cause irritation.

Inhalation: Harmful by inhalation. In high concentrations, vapors may be irritating to the respiratory system. In high concentrations, vapors are narcotic and may cause headache, fatigue, dizziness and nausea.

Ingestion: May cause discomfort is swallowed. High concentrations may cause severe lung damage.

Target Organs: Blood. Eyes. Kidneys. Liver. Respiratory system. Skin.

Chronic Effects: Liver injury may occur. Kidney injury may occur. Frequent of prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Signs and Symptoms: Liver enlargement. Edema. Conjunctivitis. Skin irritation. Defatting of the skin.

Potential Environmental: The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

4. First Aid Measures

First Aid Procedures:

Eye Contact: Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart.

Skin Contact: Remove contaminated clothes and rinse skin thoroughly with water.

Inhalation: Move injured person into fresh air and keep person calm under observation. Get medical attention immediately.

Ingestion: Rinse mouth thoroughly with water and give large amounts of milk or water, if person is conscious

Notes to Physician: In case of shortness of breath, give oxygen. Treat symptomatically.

General Advice: In case of shortness of breath, give oxygen. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. First aid personnel must be aware of own risk during rescue.

5. Fire Fighting Measures

Flammable Properties: Heat may cause the containers to explode. The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures.

Extinguishing Media: Extinguish with foam, carbon dioxide, dry powder or water fog.

Specific Hazards Arising From the Chemical: During fire, gases hazardous to health may be formed. Solvent vapors may form explosive mixtures with air.

Protective Equipment and Precautions for Firefighters: Use standard firefighting procedures and consider the hazards of other involved materials. Containers close to fire should be removed or cooled with water.

Firefighting Equipment/instructions: Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special Methods: Use standard firefighting procedures and consider the hazards of other involved materials. Containers close to fire should be removed or cooled with water.

Hazardous Combustion: Carbon monoxide and carbon dioxide.

6. Accidental Release Measures

Personal Precautions: Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate the area. Avoid inhalation of vapors/spray and contact with skin and eyes. Wear suitable protective clothing. See Section 8 of the MSDS for Personal Protective Equipment.

Environmental Precautions: Avoid discharge into drains, water courses or onto the ground unless authorize by permit.

Methods for Containment: Dike the spilled material, where this is possible. this material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

Methods for Cleaning Up: For waste disposal see section 13 of the MSDS. Remove sources of ignition. Absorb spillage with non-combustible, absorbent material.

Other Information: Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling: Local exhaust is recommended. Avoid inhalation of vapors and spray mist and contact with skin and eyes. Vapors are heavier than air and may travel along the floor and in the bottom of containers. Vapors may be ignited by a spark, a hot surface or an ember. Ground container and transfer equipment to eliminate static electric sparks. Observe good industrial hygiene practices. Wear protective gloves and appropriate clothing to prevent skin contact. Wear approved safety goggles.

Storage: Follow rules for flammable liquids. Do not store near heat sources or expose to high temperatures. Store in closed original container in a dry place. Protect against direct sunlight. Store away from incompatible materials.

8. Exposure Controls, Personal Protection

US. ACGIH Threshold Limit Values

Component	Cas No.	Type	Value
Dibutyl Tin bisneodecanoate	68928-76-7	STEL	0.2 mg/m ³
Ethyl silicate	78-10-4	TWA TWA	0.1 mg/m ³ 10 ppm
Dibutyltin dilaurate	77-58-7	STEL	0.2 mg/m ³

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Cas No.	Type	Value
Dibutyl Tin bisneodecanoate	68928-76-7	PEL	0.1 mg/m ³
Ethyl silicate	78-10-4	PEL	100 ppm 850 mg/m ³
Dibutyltin dilaurate	77-58-7	PEL	0.1 mg/m ³

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Component	Cas No.	Type	Value
Dibutyl Tin bisneodecanoate	68928-76-7	STEL	0.2 mg/m ³
Ethyl silicate	78-10-4	TWA TWA	0.1 mg/m ³ 10 ppm 85 mg/m ³
Dibutyltin dilaurate	77-58-7	STEL	0.2 mg/m ³

Canada. British Columbia OELs (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Component	Cas No.	Type	Value
Dibutyl Tin bisneodecanoate	68928-76-7	STEL	0.2 mg/m ³
Ethyl silicate	78-10-4	TWA TWA	0.1 mg/m ³ 10 ppm 85 mg/m ³
Dibutyltin dilaurate	77-58-7	STEL	0.2 mg/m ³

Canada. Ontario OELs. (Ministry of Labor-Control of Exposure to Biological or Chemical Agents)

Component	Cas No.	Type	Value
Dibutyl Tin bisneodecanoate	68928-76-7	TWA	0.1 mg/m ³
Ethyl silicate	78-10-4	TWA	10 ppm 85 mg/m ³
Dibutyltin dilaurate	77-58-7	TWA	0.1 mg/m ³

Canada. Ontario OELs. (Ministry of Labor-Regulation Respecting the Quality of the Work Environment)

Component	Cas No.	Type	Value
Dibutyl Tin bisneodecanoate	68928-76-7	STEL	0.2 mg/m ³
Ethyl silicate	78-10-4	TWA	0.1 mg/m ³ 10 ppm 85 mg/m ³
Dibutyltin dilaurate	77-58-7	STEL	0.2 mg/m ³

Mexico. Occupational Exposure Limit Values

Component	Cas No.	Type	Value
Dibutyl Tin bisneodecanoate	68928-76-7	STEL	0.2 mg/m ³
Ethyl silicate	78-10-4	TWA STEL	0.1 mg/m ³ 30ppm 255 mg/m ³
Dibutyltin dilaurate	77-58-7	TWA STEL	10 ppm 85 mg/m ³ 0.2 mg/m ³

Exposure Guidelines: Follow standard monitoring procedures.

Engineering Controls: Ensure adequate ventilation, especially in confined areas. Provide adequate general and local exhaust ventilation.

Personal Protective Equipment

Eye/Face Protection: Do not get in eyes. Eye wash fountain is recommended.

Skin Protection: Wear appropriate chemical resistant clothing. Suitable gloves can be recommended by the glove supplier.

Respiratory Protection: Respiratory protection must be used if air contamination exceeds acceptable level. Selection and use of respiratory protective equipment should be in accordance with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

General Hygiene Considerations: Do not get in eyes. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Appearance:	Purple Liquid
Color:	Purple
Odor:	Slightly
Odor Threshold:	NA
Physical State:	Liquid

Form:	Viscous Liquid
pH:	NA
Melting Point:	NA
Freezing Point:	NA
Boiling Point:	NA
Flash Point:	>143.6°F (>62°C)
Evaporation Rate:	NA
Flammability Limits in air, upper, % by volume:	NA
Flammability Limits in air, lower, % by volume:	NA
Vapor Pressure:	NA
Vapor Density:	NA
Specific Gravity:	1.03
Solubility (water):	Not Determined. Reacts
Partition Coefficient (N-octanol/water):	NA
Auto-ignition Temp:	NA
Decomposition Temp:	NA

10. Stability and Reactivity

Chemical Stability: Material reacts with water. Stable under normal temperature conditions. Contact with water liberates ethanol.

Conditions to avoid: Moisture, heat, sparks, flames. Protect against direct sunlight.

Incompatible Materials: Acids, alkalines, oxidizing agents and water.

Hazardous Decomposition Products: Carbon dioxide, carbon monoxide, silicon dioxide and formaldehyde.

Possibility of Hazardous Reactions: Will not occur

11. Toxicological Information

TOXICOLOGICAL DATA COMPONENTS

TEST RESULTS

Ethyl Silicate (78-10-4)

Acute Dermal LD Rabbit: >2000 mg/kg
Acute Inhalation LC50 Rat: >800 ppm 4h
Acute Oral LD50 Rat: 6270 mg/kg

Dibutyltin dilaurate (77-58-7)

Acute Oral LD50 Rat: 175 mg/kg

Local Effects: Components of the product may be absorbed into the body through the skin. Blood disorder may occur after ingestion. Liver toxicity. Contact may irritate or burn eyes.

US ACGIH Threshold Limit Values: Skin Designation

Dibutyl Tin bisneodecanoate (68928-76-7)

can be absorbed through the skin

Dibutyltin dilaurate (77-58-7)

can be absorbed through the skin

Sensitization: Not classified

Chronic Effects: Prolonged inhalation may be harmful. Repeated absorption may cause disorder to central nervous system, liver, kidneys and blood. Prolonged exposure may cause chronic effects.

Sub Chronic Effects: Blood disorders may occur after prolonged inhalation, prolonged skin contact and/or ingestion. Kidney injury may occur.

Carcinogenicity: This product is not considered to be a carcinogen by IARC, ACGIH, NTP or OSHA.

ACGIH Carcinogens

Dibutyl Tin bisneodecanoate (68928-76-7) A4 Not classifiable as a human carcinogen
Dibutyltin dilaurate (77-58-7) A4 Not classifiable as a human carcinogen

Epidemiology: No data available

Mutagenicity: No data available

Reproductive Effects: No data available

Further Information: Symptoms may be delayed

12. Ecological Information

Eco Toxicological Data Components

Test Results

Ethyl silicate (78-10-4)

EC50 Daphnia: 4 mg/l 15 days

IC50 Green algae (*Dunaliella bioculata*): 1-5 mg/l 30 days

Eco toxicity: The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment

Environmental Effects: Not classified as an environmental hazard.

Persistence and Degradability: No data available

Bioaccumulation/Accumulation: No data available

Partition coefficient (n-octanol/water): No data available

Mobility in Environmental Media: The product contains organic solvents which will evaporate easily from all surfaces. The product is slightly soluble in water

13. Disposal Considerations

Disposal Instructions: Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulation, and material characteristics at time of disposal.

Waste from Residues/Unused Products: Dispose in accordance with applicable federal, state and local regulations

14. Transport Information

This material is not regulated under 49 CFR if in a container of 119 gallon capacity or less.

DOT Basic Shipping Requirements

UN number: NA1993

Proper shipping name: Combustible liquid, n.o.s. (Ethyl silicate)

Hazard class: Comb liquid

Subsidiary hazard class: None

Packing group: III

Environmental Hazards

Marine pollutant: Yes

Special precautions: This material is not regulated under 49 CFR if in a container of 119 gallon capacity or less

Labels required: None

Additional Information

Special provisions: IB3, T1, T4, TP1
Packaging exceptions: 150
Packaging non bulk: 203
Packaging bulk: 241

IATA-Not regulated as dangerous goods

IMDG Basic Shipping Requirements

UN Number: 3082

Proper shipping name: Environmentally Hazardous Substance, Liquid, n.o.s. (Dibutyl Tin bisneodecanoate)

Hazard class: 9

Packing group: III

Environmental Hazards

Marine pollutant: Yes

EmS No: F-A, S-F

TDG-Not regulated as dangerous goods

15. Regulatory Information

US Federal Regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the US EPA TSCA Inventory List
CERCLA/SARA Hazardous Substances-Not applicable

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)-Not regulated
CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.40)-None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard: Yes
Delayed Hazard: Yes
Fire Hazard: Yes
Pressure Hazard: No
Reactivity Hazard: No

Section 302 extremely Hazardous substance (40 CFR 355, Appendix A)- No

Section 311/312 (40 CFR 370)- No

Drug Enforcement- Not controlled

Canadian regulations: This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS status: Controlled

WHMIS classification: B3-Flammable/Combustible
D2B-Other Toxic Effects-TOXIC

Inventory Status	Inventory Name	On Inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes

Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
US and Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*"Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

State regulations: This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US-California Hazardous Substances (Director's): Listed Substance

Dibutyl Tin bisneodecanoate (CAS 68928-76-7) Listed
 Ethyl silicate (CAS 78-10-4) Listed

US-Massachusetts RTK-Substance: Listed Substance

Ethyl silicate (CAS 78-10-4) Listed

US-New Jersey RTK-Substances: Listed Substance

Ethyl silicate (CAS 78-10-4) Listed

US-Pennsylvania RTK-Hazardous Substances: Listed Substance

Ethyl silicate (CAS 78-10-4) Listed

Mexico Regulations: This safety data sheet was prepared in accordance with the official Mexican Standard (NOM-018-STPS-2000).

16. Other Information

California Proposition 65 involving warnings of the presence of certain listed chemicals is now in effect.

Pro-Sil believes the law requires us to inform you that detectable amounts of any of the listed chemicals might be present in Pro-Sil products. Based on a review of the list, Pro-Sil products, like all synthetic and naturally occurring chemical substances, may conceivably contain trace contaminants of some of the listed substances. While not necessarily added to our products as ingredients, some of the listed chemicals may be present in the raw materials as received from suppliers over which we have no control.

In order to comply with the California Law, even though some of the listed substances may not represent a significant risk as defined by the regulations, we feel obligated to make the following statement:

“Warning: This product may contain trace amounts of some chemicals considered by the State of California to be carcinogens or reproductive Toxicants.”

Preparation Date: 12/9/2014

Prepared by: Pro-Sil

Comments: This Material Safety Data Sheet was prepared using information provided by Fiberlay Inc.

Revisions: None

We believe the above information is correct as of the date of this MSDS. However, as this information and the conditions under which the product are used are beyond the control of Pro-Sil, it is the user's obligation to determine the conditions for the safe use of the product. No warranty, expressed or implied, is hereby made.