

Section 1 – Chemical Product and Company Identification

MSDS Name: t-Butyldiphenylchlorosilane(BPS)

Chemical Family: ORGANOSILANE

Molecular Formula: $(\text{CH}_3)_3\text{CPH}_2\text{Si-CL}$

Use of the substance: For research and development use only.

Company: Optima Chemicals Group, LLC
200 Willacoochee Hwy.
Douglas, Georgia 31535
Telephone (912) 384-5101 FAX (912) 384-6330
Emergencies: Telephone (912) 384-5101

Section 2 – Hazards Identification

Hazards:

Corrosive – to eyes (may cause blindness), skin, nose and throat. Harmful if swallowed or inhaled. Reacts slowly with water or moisture to form Hydrochloric Acid.

NFPA Rating: Health: 3 Flammability: 1 Reactivity: 0 Special: W

Section 3 – Composition, Information on Ingredients

<u>CAS #</u>	<u>Chemical Name</u>	<u>Wt.%</u>
58479-61-1	t-Butyldiphenylchlorosilane	>97

Section 4 – First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, lifting the upper and lower eyelids intermittently. See a medical doctor or ophthalmologist immediately.

Skin: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and/ or shoes. Thoroughly wash with soap and water, and seek medical attention.

Ingestion: Quickly wipe material from the mouth, and rinse mouth out with plenty of water. Dilute with 1 to 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

Inhalation: Remove from exposure, to fresh air immediately. If breathing discomfort occurs and persists seek medical attention. If breathing has stopped, give artificial respiration, and see a medical doctor immediately.

Notes to Medical Doctor: This product is corrosive to eyes, skin, and mucous membranes of the respiratory and gastrointestinal tracts. Careful gastric lavage with an endotracheal tube in place should be considered. Treatment is controlled with removal of exposure and symptomatic and supportive care.

Section 5 – Fire Fighting Measures

Flammable Limits: Upper: Not available Lower: Not available

General Hazard: Corrosive

Fire Extinguishing Agents Recommended: Use CO₂, dry chemical powder, water spray or foam.

Special Fire fighting Procedures: Wear full protective clothing and self-contained breathing apparatus(SCBA) approved for fire fighting. This is necessary to protect against heat, products of combustion and oxygen deficiency. Do not breathe smoke, gases, or vapors generated.

Autoignition temperature: Not applicable.

Properties contributing to flammability: Not applicable.

Flashpoint: 112°C (234°F) – Closed Cup

Sensitivity to Static Discharge: Not applicable

Sensitivity to Impact: Not applicable

Section 6 – Accidental Release Measures

Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Do not let product enter drains.

Methods for cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Before cleanup measures begin, review the entire MSDS with particular attention to Section 3, Emergency Overview and Potential Health Affects; and Section 8, Recommended Personal and Protective Equipment

Section 7 - Handling and Storage

Handling

Avoid inhalation of vapour or mist.
Normal measures for preventive fire protection.

Storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Moisture sensitive. Handle and store under inert gas.

Section 8 – Exposure Controls, Personal Protection

Exposure Limits: PEL (OSHA) -None, TWA (ACGIH) - None, STEL/Ceiling (OSHA)- None, STEL/Ceiling (ACGIH) -None

Engineering Controls: use local exhaust ventilation to keep airborne concentrations below exposure limits.

Eyes and Face: Wear splash goggles with a face shield.

Skin: Chemical resistant gloves and clothing.

Respiratory: When engineering controls are not adequate, wear a NIOSH/MSHA respirator approved for protection against organic dusts.

Work Hygienic Practices: Quick-drench eyewash and safety shower.

Section 9 – Physical and Chemical Properties

Appearance and Odor: Non odorous, clear liquid

Boiling Point: 90°C (194°F) at 0.01 hPa (0.01 mmHg)

Melting Point: Not available

Flash Point: 112° C (234° F)

Vapor Pressure: Not available

Vapor Density: Not available

pH: Not available

Specific Gravity: Not available

Percent Volatile: Not available

Water Solubility: Not available

Evaporation Rate: Not applicable

Flammable Limits: Not available

Molecular Weight: 274.87

Autoignition Temperature: Not available

Viscosity: Not available

Decomposition Temperature: Not available

Explosive Properties: Not explosive

Oxidizing Properties: Not an oxidizer

Section 10 – Stability and Reactivity

Storage stability

Stable under recommended storage conditions.

Materials to avoid

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas, silicon,oxides

Section 11 – Toxicological Information

Eyes: Expected to be corrosive.

Skin: Expected to be corrosive.

Ingestion: Expected to be corrosive.

Inhalation: Expected to be corrosive.

Acute Effects from Overexposure: This product is corrosive to the eyes (may cause blindness), skin, respiratory and gastrointestinal tracts.

Chronic Effects from Overexposure: Continuous inhalation exposure may cause lung damage.

Sensitization: No data available.

Carcinogenicity: Not listed by NTP, OSHA, EH40. IARC, or ACGIH.

Mutagenicity: No data available.

Reproductive Toxicity: No data available.

Section 12 – Ecological Information

Ecotoxicological Information: No data available.

Chemical Fate Information: No data available.

Section 13 – Disposal Considerations

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber..

Section 14 – Transport Information

DOT (US)

UN-Number: 2987 Class: 8 Packing group: II
Proper shipping name: Chlorosilanes, corrosive, n.o.s.
Labels: Corrosive

UN Number: UN2987

Packing Group: II

Marine Pollutant: No

Custom Tariff Number: 2931.00.3000

PIH: Not designated Poison Inhalation Hazard by USDOT.

Section 15 – Regulatory Information

OSHA Hazards

Corrosive

DSL Status

This product contains the following components listed on the Canadian NDSL list. All other components are on the Canadian DSL list.

tert-Butyldiphenylchlorosilane
CAS-No.
58479-61-1

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

tert-Butyldiphenylchlorosilane

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New Jersey Right To Know Components

tert-Butyldiphenylchlorosilane

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58479-61-1

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

Section 16 – Additional Information

Creation Date: 06/18/10

This MSDS has been prepared to meet U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS) requirements.

This information is believed to be accurate and represents the best information currently available to Optima Chemical Group LLC. However, we make no warranty of merchantability, express or implied, with respect to such information and assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.