







Material Safety Data Sheet

| HAZARD WARNINGS | RISK PHRASES | PROTECTIVE CLOTHING |
|---|---|---|
|   | <p>Highly toxic; do not ingest or inhale. Environmental hazard. This material is very toxic to aquatic organisms and may cause long term adverse effects to the aquatic environment. Irritating to skin, eyes, and the respiratory system. Moisture sensitive material. Readily absorbed through skin. POSSIBLE MUTAGEN. MINIMIZE EXPOSURE. Refrigerate.</p> |     |

Section I. Chemical Product and Company Identification

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| Chemical Name | Trimethyltin Chloride | | |
| Catalog Number | T0958 | Supplier | TCI America 9211 N. Harbortgate St. Portland OR 1-800-423-8616 |
| Synonym | Chlorotrimethylstannane | | |
| Chemical Formula | (CH ₃) ₃ SnCl | | |
| CAS Number | 1066-45-1 | | |
| | | In case of Emergency Call | Chemtrec® (800) 424-9300 (U.S.) (703) 527-3887 (International) |

Section II. Composition and Information on Ingredients

| Chemical Name | CAS Number | Percent (%) | TLV/PEL | Toxicology Data |
|-----------------------|------------|----------------|---|---|
| Trimethyltin Chloride | 1066-45-1 | Min. 98.0 (GC) | This compound is classified as a possible mutagen. There is no acceptable exposure limit for a mutagen. | Rat LD ₅₀ (oral) 12600 ug/kg Rat LD ₅₀ (intraperitoneal) 7450 ug/kg Mouse LD ₅₀ (intravenous) 1800 ug/kg |

Section III. Hazards Identification

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| Acute Health Effects | <p>Highly toxic if ingested or inhaled. Avoid prolonged contact with this material. Overexposure may result in serious illness or death.</p> <p>Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.</p> <p>Readily absorbed through skin.</p> <p>Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.</p> |
| Chronic Health Effects | <p>CARCINOGENIC EFFECTS : Not available.</p> <p>MUTAGENIC EFFECTS : Not available.</p> <p>TERATOGENIC EFFECTS : Not available.</p> <p>DEVELOPMENTAL TOXICITY : Reproductive Effects.</p> <p>Rat TDLo Oral 9066 ug/kg, female 14 days prior to mating -21 days after birth</p> <p>TOXIC Effects:</p> <p>Effects on Newborn - Behavioral</p> <p>Rat TDLo Intraperitoneal 9 mg/kg, female 17 days of pregnancy</p> <p>TOXIC Effects:</p> <p>Maternal Effects - Other effects</p> <p>Effects on Fertility - Litter Size</p> <p>Effects on Embryo or Fetus - Fetal Death</p> <p>Rat TDLo Intraperitoneal 9 mg/kg, female 17 days of pregnancy</p> <p>TOXIC Effects:</p> <p>Effects on Newborn - Live birth index</p> <p>Effects on Newborn - Weaning or lactation index</p> |

Section IV. First Aid Measures

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| Eye Contact | Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention. |
| Skin Contact | In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately. |
| Inhalation | If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve. |
| Ingestion | INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. |

Section V. Fire and Explosion Data

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| Flammability | May be combustible at high temperature. | Auto-Ignition | Not available. |
| Flash Points | 97°C (206.6°F) | Flammable Limits | Not available. |
| Combustion Products | These products are toxic carbon oxides (CO, CO ₂). Some metallic oxides, halogenated compounds WARNING: Highly toxic HCl gas is produced during combustion. | | |
| Fire Hazards | Not available. | | |
| Explosion Hazards | Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. | | |
| Fire Fighting Media and Instructions | SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet. Consult with local fire authorities before attempting large scale fire-fighting operations. | | |

Section VI. Accidental Release Measures

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| Spill Cleanup Instructions | Highly toxic material. Environmentally hazardous material. Irritating material. Moisture sensitive material. Material is readily absorbed through skin. Possibly mutagenic material. Stop leak if without risk. DO NOT get water inside container. DO NOT touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all sources of ignition. Consult federal, state, and/or local authorities for assistance on disposal. |
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Section VII. Handling and Storage

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| Handling and Storage Information | HIGHLY TOXIC. ENVIRONMENTAL HAZARD. IRRITANT. MOISTURE SENSITIVE. READILY ABSORBED THROUGH SKIN. POSSIBLE MUTAGEN. REFRIGERATE. Keep locked up. Keep away from heat. Mechanical exhaust required. When not in use, tightly seal the container and store in a dry, cool place. Avoid excessive heat and light. DO NOT ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Treat symptomatically and supportively. |
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Section VIII. Exposure Controls/Personal Protection

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| Engineering Controls | Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. |
| Personal Protection | Splash goggles. Lab coat. Dust respirator. Boots. Gloves. A MSHA/NIOSH approved respirator must be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.  |
| Exposure Limits | This compound is classified as a possible mutagen. There is no acceptable exposure limit for a mutagen. |

Section IX. Physical and Chemical Properties

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| Physical state @ 20°C | Solid. (White, Crystals and Powder.) | Solubility | Miscible with water. Soluble in chloroform, toluene, many organic solvents. |
| Specific Gravity | Not available. | Partition Coefficient | Not available. |
| Molecular Weight | 199.27 | Vapor Pressure | 3.5 kPa at 25°C |
| Boiling Point | 154 to 156°C (309.2 to 312.8°F) | Vapor Density | Not available. |
| Melting Point | 40°C (104°F) | Volatility | Not available. |
| Refractive Index | Not available. | Odor | Not available. |
| Critical Temperature | Not available. | Taste | Not available. |
| Viscosity | Not available. | | |

Section X. Stability and Reactivity Data

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| Stability | This material is stable if stored under proper conditions. (See Section VII for instructions) |
| Conditions of Instability | Avoid excessive heat and light. Moisture sensitive. |
| Incompatibilities | Reactive with strong oxidizing agents. |

Section XI. Toxicological Information

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| RTECS Number | WH6850000 |
| Routes of Exposure | Eye Contact. Ingestion. Inhalation. |
| Toxicity Data | Rat LD ₅₀ (oral) 12600 ug/kg Rat LD ₅₀ (intraperitoneal) 7450 ug/kg Mouse LD ₅₀ (intravenous) 1800 ug/kg |
| Chronic Toxic Effects | CARCINOGENIC EFFECTS : Not available. MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Not available. DEVELOPMENTAL TOXICITY : Reproductive Effects. Rat TDLo Oral 9066 ug/kg, female 14 days prior to mating –21 days after birth TOXIC Effects: Effects on Newborn – Behavioral Rat TDLo Intraperitoneal 9 mg/kg, female 17 days of pregnancy TOXIC Effects: Maternal Effects – Other effects Effects on Fertility – Litter Size Effects on Embryo or Fetus – Fetal Death Rat TDLo Intraperitoneal 9 mg/kg, female 17 days of pregnancy TOXIC Effects: Effects on Newborn – Live birth index Effects on Newborn – Weaning or lactation index |
| Acute Toxic Effects | Highly toxic if ingested or inhaled. Avoid prolonged contact with this material. Overexposure may result in serious illness or death. Irritating to eyes and skin on contact. Inhalation causes irritation of the lungs and respiratory system. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Readily absorbed through skin. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound. |


Section XII. Ecological Information

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| Ecotoxicity | Not available. |
| Environmental Fate | Trimethyltin chloride as one of a class of triorganotins may have been used experimentally as a pesticide. However, wide-spread use of trimethyltin chloride as a pesticide has not occurred. Trimethyltin chloride may occur in the environment as a result of the biological or chemical methylation of tin or tin compounds from natural or anthropogenic sources. If released to air, an estimated vapor pressure of 26 mm Hg at 25 deg C indicates trimethyltin chloride will exist solely as a vapor in the ambient atmosphere. Vapor-phase trimethyltin chloride will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 4 days. It may be susceptible to direct photolysis based upon the absorption of UV light > 290 nm by tri-, di-, and monobutyltin compounds. If released to soil, trimethyltin chloride is expected to have very high mobility based upon an estimated Koc of 49. Volatilization from moist soil surfaces is not expected to be an important fate process since trimethyltin chloride will dissociate in water to the trimethyltin cation and ions will not volatilize. Trimethyltin chloride may volatilize from dry soil surfaces based upon its estimated vapor pressure. If released into water, trimethyltin chloride is not expected to adsorb to suspended solids and sediment based upon the estimated Koc. Trimethyltin chloride may be susceptible to biodegradation based upon the observation that the tributyltin species obtained by dissolution of tributyltin oxide in water are sequentially degraded to dibutyltin, monobutyltin, and finally to inorganic tin in water/sediment mixture or water. This compound is expected to exist in the cation form in the environment and therefore volatilization from water surfaces is not expected to be an important fate process. Based upon complete solubility in water, bioconcentration in aquatic organisms is expected to be low. Trimethyltin compounds such as trimethyltin chloride exist in aqueous solution as mixtures of hydrated trimethyltin cation and trimethyltin hydroxide, the composition of which varies with pH. Trimethyltin cation reacts with water and behaves like a simple protic acid due to the resulting formation of hydronium ion and trimethyltin hydroxide. Occupational exposure to trimethyltin chloride may occur through inhalation and dermal contact with this compound at workplaces where trimethyltin chloride is produced or used. |

Section XIII. Disposal Considerations

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| Waste Disposal | Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance. |
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Section XIV. Transport Information

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| DOT Classification | DOT Class 6.1: Toxic material |
| PIN Number | UN3146 |
| Proper Shipping Name | Organotin compound, solid, n.o.s. |
| Packing Group (PG) | II Severe Marine Pollutant |
| DOT Pictograms |  |

Section XV. Other Regulatory Information and Pictograms

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| TSCA Chemical Inventory (EPA) | This compound is ON the EPA Toxic Substances Control Act (TSCA) inventory list. |
| WHMIS Classification (Canada) | CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). On NDSL |
| EINECS Number (EEC) | 213-917-8 |
| EEC Risk Statements | R23/24/25- Toxic by inhalation, in contact with skin and if swallowed. R36/37/38- Irritating to eyes, respiratory system and skin. R50- Very toxic to aquatic organisms. R53- May cause long-term adverse effects in the aquatic environment. |
| Japanese Regulatory Data | Not available. |

Section XVI. Other Information

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Notice to Reader

TCI laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.