



SAFETY DATA SHEET

Section 1. Identification

Product Name:	Hexamethylditin
Product Type:	Liquid
Recommended Use:	Chemical intermediate. For research use only.
CAS Number:	661-69-8
Product Number:	SN1698
Product Manufacturer:	Ereztech LLC 11555 Medlock Bridge Road, Suite 100 Johns Creek, GA 30097
Product Information:	(888) 658-1221
<u>In Case of an Emergency:</u>	CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International); CCN836180 *** Contact manufacturer for all non-emergency calls.

Section 2. Hazards Identification

Appearance/Odor:	Colorless liquid to white solid, pungent odor.
Classification:	FLAMMABLE LIQUIDS – Category 4, H227 ACUTE TOXICITY; ORAL - Category 2, H300 ACUTE TOXICITY; DERMAL – Category 1, H310 ACUTE TOXICITY; INHALATION – Category 2, H330 HAZARDOUS TO THE AQUATIC ENVIRONMENT, ACUTE TOXICITY – Category 1, H400 HAZARDOUS TO THE AQUATIC ENVIRONMENT, CHRONIC TOXICITY – Category 1, H410

GHS Label Elements

Signal Word:	DANGER
Hazard Statements:	H227: Combustible liquid. H300: Fatal if swallowed. H310: Fatal in contact with skin. H330: Fatal if inhaled. H400: Very toxic to aquatic life. H410: Very toxic to aquatic life with long lasting effects.

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Section 2. Hazards Identification

Hazard Pictograms:



Precautionary Statements

Prevention:

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260: Do not breathe sprays/mists/dusts/aerosols/vapors/gases.
P262: Do not get in eyes, on skin, or on clothing.
P264: Wash hands and exposed skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P284: Wear respiratory protection.
P301 + P316: IF SWALLOWED: Get emergency medical help immediately.
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P316: Get emergency medical help immediately.
P330: Rinse mouth.
P361 + P364: Take off immediately all contaminated clothing and wash it before reuse.
P370 + P378: In case of fire: Use water spray (fog), alcohol-resistant foam, dry chemical or carbon dioxide for extinction.

Storage:

P391: Collect spillage.
P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

Disposal:

P405: Store locked up.
P501: Dispose of contents/ container in accordance with federal, state and local regulations (e.g. US: 40 CFR Part 261).

OSHA/HCS Status:

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Hazards Not Otherwise Classified [HNOC]:

None identified.

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Section 3. Composition/Information on Ingredients

Synonyms	: Hexamethyldistannane; Distannane,hexamethyl-; Trimethyltin dimer.
Formula	: C ₆ H ₁₈ Sn ₂
Molecular Weight	: 327.63 g/mol

Ingredient Name	%	CAS Number
Hexamethylditin	≥ 99	661-69-8

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First Aid Measures

Description of Necessary First Aid Measures

- General Advice:** Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
- Eye Contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Rinse for a minimum of 15 minutes. Check for and remove any contact lenses after initial rinse period and continue rinsing for an additional 15 minutes. Keep eyes wide open during rinsing process. Get emergency medical help immediately.
- Skin Contact:** Remove all contaminated clothing and shoes. Wash off contaminated skin with soap and plenty of water. Get emergency medical help immediately.
- Inhalation:** Remove victim to fresh air and keep comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Do not use mouth-to-mouth method if victim ingested or inhaled the product; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get emergency medical help immediately.
- Ingestion:** Do NOT induce vomiting. Rinse mouth. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in a recovery position. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Get emergency medical help immediately.
- In exceptional cases where medical care will not be available within one hour of ingestion, induce vomiting (only in persons who are fully awake and fully conscious) then administer activated charcoal (20 – 40 g in 10% slurry) and get emergency medical help as quickly as possible.

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Section 4. First Aid Measures

Most Important Symptoms/Effects, Acute and Delayed Potential Acute Health Effects

- General:** Exposed persons may be expected to experience difficulty in breathing. Symptoms of overexposure may include headache, dizziness, tiredness, nausea and vomiting.
- Eye Contact:** No specific symptoms have been identified for this product.
- Inhalation:** Product is fatal if inhaled. No specific symptoms have been identified for this product.
- Skin Contact:** Product is fatal in contact with the skin. No specific symptoms have been identified for this product.
- Ingestion:** Product is fatal if ingested. No specific symptoms have been identified for this product.

Indication of Immediate Medical Attention and Special Treatment Needed, If Necessary

- Notes to Physician:** Treat symptomatically. Poisoning by the product may initially be asymptomatic.
- Specific Treatments:** No specific treatment identified.
- Protection of First Responders:** No action taken shall be taken involving any personal risk without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See Toxicological Information (Section 11)

Section 5. Fire Fighting Measures

- General Hazards:** Product is extremely toxic. Self-contained breathing apparatus should be worn at all times to avoid inhalation.
- Specific Hazards:** Combustible material. Keep product and empty container away from heat and sources of ignition. Containers may explode when heated. Do not allow run-off from fire-fighting to enter drains or water courses. Product is very toxic to aquatic life with long lasting effects.
- Suitable Extinguishing Media:** Use water spray (fog), alcohol-resistant foam, dry chemical or carbon dioxide.
- Unsuitable Extinguishing Media:** Do not use water jet as it may act to spread the fire and to send toxic fumes/gases into the air.
- Unusual Fire and Explosion Hazards:** Product runoff to sewer may create a fire or explosion hazard. Vapors/gases released under fire conditions are heavier than air and may spread long distances along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to an ignition source and flashback. Containers may explode when heated.

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Section 5. Fire Fighting Measures

Product of Combustion:	Decomposition products include carbon oxides (CO _x) and tin oxide fumes. Irritating/toxic fumes and organic acid vapors may be generated during exposure to elevated temperatures or open flame.
Protection of Firefighters:	<p>Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Avoid contact with skin or eyes. Prevent the formation and inhalation of sprays, mists, dusts, aerosols, vapors and gases. Eliminate all local and distant ignition sources. Move containers from fire area if process can be accomplished without risk to firefighters. To reduce the possibility of explosion, use a water spray or fog to reduce direct vapors and to cool unopened containers. Do not cut, grind, drill or weld on or near product containers (even empty) of this product because an explosion may result.</p> <p>Fire-fighters should wear appropriate protection equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in a positive pressure mode.</p>

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

For Non-Emergency Personnel:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not inhale sprays, mists, dusts, aerosols, vapors and gases. Provide adequate ventilation. Wear respiratory protection. Put on appropriate personal protective equipment.
For Emergency Responders:	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For Non-Emergency Personnel".
Environmental Precautions:	Do not allow dispersal of spilled material and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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Section 6. Accidental Release Measures

Methods for Containment

General:

Move containers from spill area if safe to do so. Dispose of in accordance with federal, state and local regulations. Contaminated absorbent material may pose the same hazard as the spilled product.

Small Spill:

Contain and collect spillage with an inert, absorbent material (e.g. sand, earth, vermiculite or diatomaceous earth) and place in a sealed container for disposal (see Section 13).

Large Spill:

Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with an inert, absorbent material (e.g. sand, earth, vermiculite or diatomaceous earth) and place in a sealed container for disposal (see Section 13).

Section 7. Handling and Storage

Precautions:

Product is air/moisture sensitive; handle under a dry, inert gas. Nitrogen with less than 5 ppm each of moisture and oxygen is recommended. Keep away from all sources of ignition – NO SMOKING. Use only under a chemical fume hood. Keep container tightly sealed. Do not allow contact with skin, eyes and clothing. Prevent the formation and inhalation of sprays, mists, dusts, aerosols, vapors and gases. Do not ingest. Avoid prolonged or repeated exposure. Ensure adequate ventilation.

Protective Measures:

Put on appropriate personal protective equipment (see Section 8). Keep in the original container kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

General Occupational Hygiene:

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Safe Storage Conditions:

Product is air/moisture sensitive; store under an inert gas. Nitrogen with less than 5 ppm each of moisture and oxygen is recommended. Store refrigerated below 0 °C.

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Section 7. Handling and Storage

Safe Storage Conditions (cont.): Store in original container protected from direct sunlight in a cool, dry and well-ventilated area, away from incompatible materials and food and drink. Keep container tightly closed and sealed until ready for use. Store locked up.

Section 8. Exposure Controls/Personal Protection

Introductory Remarks: These recommendations provide general guidance for handling this product. Because work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and conduct regular repairs. Waste from these procedures should be handled in accordance with Section 13.

Occupational Exposure Limits

List	Components	CAS-No.	Type	Value
ACGIH	Hexamethylditin	661-69-8	TLV	0.1 mg/m ³ (TWA) Sn 0.2 mg/m ³ (STEL -skin) Sn
NIOSH	Hexamethylditin	661-69-8	IDLH TWA	25 mg/m ³ 0.1 mg/m ³
OSHA Z1	Hexamethylditin	661-69-8	PEL	0.1 mg/m ³ (TWA) Sn (vacated)

Engineering Controls: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute. Provide an eyewash/shower station.

Environmental Exposure Controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual Protection Measures

Hygiene Measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Remove all soiled and contaminated clothing immediately. Do not inhale sprays, mists, dusts, aerosols, vapors or gases. Do not ingest or allow contact with eyes and skin. Ensure that eyewash stations and safety showers are close to the workstation location.

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Section 8. Exposure Controls/Personal Protection

Eye/Face Protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to sprays, mists, dusts, aerosols, or vapors. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles, faceshield (8-inch minimum). Refer to 29 CFR 1910.133, ANSI Z87.1, or European Standard EN166.

Skin Protection

Hand Protection:

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: Chemical-resistant gloves.

Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. For full contact, wear gloves made from Neoprene or nitrile rubber.

Other Skin Protection:

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory Protection:

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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Section 9. Physical and Chemical Properties

Physical State:	Liquid or solid (see Melting Point below).
Color:	Clear liquid or white solid.
Odor:	No information available.
pH:	No data available.
Melting Point:	23 – 24 °C (73.4 – 75.2 °F).
Boiling Point:	85 – 88 °C (185 – 190.4 °F) @ 45 mm Hg.
Flash Point:	61 °C (141.8 °F)
Auto-ignition temperature:	No data available.
Specific Gravity:	1.58 g/ml.
Relative Vapor Density	> 1 @ 20 °C
Water Solubility:	Soluble.

Section 10. Stability and Reactivity

Reactivity:	Product forms explosive mixtures with air during intense heating. Product is air/moisture sensitive. Direct sunlight causes slow degradation of product to an inorganic tin salt.
Chemical Stability:	This product is stable when stored under a dry, inert atmosphere and away from heat. Nitrogen containing less than 5 ppm each moisture and air is recommended. Store refrigerated at a temperature < 0 °C
Conditions to Avoid:	Exposure to air/moisture and direct sunlight.
Incompatible Materials:	Strong oxidizing agents.
Hazardous Decomposition Products:	Carbon oxides (CO _x), tin oxide fumes and organic acid vapors.
Possibility of Hazardous Reactions:	Under normal conditions of storage and use noted above, hazardous reactions will not occur. Hazardous reactions or instability may occur under certain conditions of storage or use.

Section 11. Toxicological Information

Information on Toxicological Effects

Acute Toxicity

Component	CAS No	Result	Species	Dose	Exposure
Hexamethylditin	661-69-8	LD50 Oral	Rat	7.69 mg/kg	-
Hexamethylditin	661-69-8	LD50 Dermal	Rabbit	53.8 mg/kg	-

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Section 11. Toxicological Information

Irritation/Corrosion	: No specific data available.
Sensitization	: No specific data available.
Germ Cell Mutagenicity	: No specific data available.
Carcinogenicity	
IARC	: No component of this product present at levels greater than 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	: No component of this product present at levels greater than 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.
NTP	: No component of this product present at levels greater than 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
OSHA	: No component of this product present at levels greater than 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.
Reproductive Toxicity	: No specific data available.
Teratogenicity	: No specific data available.
Specific Target Organ Toxicity (Single Exposure)	: No specific data available.
Specific Target Organ Toxicity (Repeated Exposure)	: No specific data available.
Aspiration Hazard	: No specific data available.
Information on the Likely Routes of Exposure	: Common routes of exposure: inhalation (failure to prevent dust formation), dermal (failure to use skin protection), eye (failure to use safety eyewear). Less common: ingestion (failure to employ recommended hygiene measures (e.g. smoking after handling product without washing hands or using hand protection)).
Additional Information	: The closely related compound, trimethylchlorotin, is listed on the EPA Extremely Hazardous Substance List. Human fatalities have been reported for workers inhaling vapors of trimethylchlorotin. Metabolic products of hexamethylditin are expected to be similar to trimethylchlorotin. Trimethylchlorotin is a cumulative toxin. Symptomatic manifestations can follow exposure up to five days. Reported symptoms include memory loss, exhibition of rage and anger, and reduction of sexual function.

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Section 11. Toxicological Information

Additional Information (cont.) : To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12. Ecological Information

Numerical Measures of Toxicity

Aquatic Toxicity : No specific data available. Product is very toxic to aquatic life with long lasting effects.

Persistence and Degradability

Biodegradability : No specific data available.

Bioaccumulative Potential

Component	LogP _{ow}	BCF	Potential
Hexamethylditin	5.63	-	High

Mobility in Soil : Will likely be mobile in the environment due to its water solubility.

Other Adverse Effects : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13. Disposal Considerations

Waste Treatment Methods

Product Dispose of in accordance with local, state, and federal regulations. Refer to 40 CFR 260-299 for complete waste disposal regulations. Consult your local, state, or federal agency before disposing of any chemicals.

Contaminated Packaging Empty containers retain product residue (sprays, mists, dusts, aerosols, gases) and can be dangerous. Dispose of as unused product.

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Section 14. Transport Information

	DOT	IMDG	IATA
UN Number	UN 2788	UN 2788	UN 2788
UN Proper Shipping Name	Organotin compounds, liquid, n.o.s. (Hexamethylditin)	ORGANOTIN COMPOUNDS, LIQUID, N.O.S. (Hexamethylditin)	Organotin compounds, liquid, n.o.s. (Hexamethylditin)
Transport Hazard Classes	6.1	6.1	6.1
Packing Group	II	II	II
Environmental Hazards	Yes	Yes	Yes
Additional Information	-	EMS No: F-A, S-A	-

Special Precautions for User : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transporting in Bulk According to Annex II of MARPOL 73/78 and the IBC Code : Not applicable.

Section 15. Regulatory Information

TSCA (Toxic Substance Control Act):

This product is not listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory). Use of this product is restricted to research and development only. This product must be used under the supervision of a technically qualified individual as defined by the TSCA. This product must not be used for commercial purposes or in formulations for commercial purposes.

SARA 302 Components

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

SARA 313 Components

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 (Acute Toxicity – Ingestion, Inhalation, Dermal)

Massachusetts Right to Know Components

No components are subject to Massachusetts Right to Know Act.

Pennsylvania Right to Know Components

No components are subject to Pennsylvania Right to Know Act.

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Section 15. Regulatory Information

New Jersey Right to Know Components

No components are subject to New Jersey Right to Know Act.

California Proposition 65 Components

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

Section 16. Other Information

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

HMIS Rating

HEALTH	4
FLAMMABILITY	2
PHYSICAL HAZARD	1

History

Date of Issue/Date of Revision : 4/28/2023

Date of Previous Issue : 7/15/2013.

References : None available.

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Section 16. Other Information

Abbreviations and Acronyms

ACGIH: American Conference of Governmental Industrial Hygienists.

ATE: Acute Toxicity Estimate

CAS: Chemical Abstracts Service (division of the American Chemical Society).

DOT: US Department of Transportation.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

HMIS: Hazardous Materials Identification System.

HNOC: Hazards Not Otherwise Classified.

IARC: International Agency for Research on Cancer.

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA).

IDLH: Immediately Dangerous to Life or Health (US National Institute for Occupation Health and Safety (NIOSH)).

IMDG: International Maritime Code for Dangerous Goods.

NFPA: National Fire Protection Association.

NIOSH: National Institute of Occupational Safety and Health.

NTP: National Toxicology Program.

OECD: Organization for Economic Co-Operation and Development.

OEL: Occupational Exposure Limit.

OSHA: Occupational Safety and Health Administration.

PEL: Permissible Exposure Limits.

REL: Recommended Exposure Limits.

SARA: Superfund Amendments and Reauthorization Act.

STEL: Short Term Exposure Limit (ACGIH)

STOT: Specific Target Organ Toxicity.

TLV: Threshold Limit Values (ACGIH).

TWA: Time Weighted Average.

VOC: Volatile Organic Compound.

Disclaimer

The information herein is believed to be accurate and is presented in good faith; however, no warranties or representations are made by Ereztech LLC regarding the accuracy or completeness of the information. Ereztech LLC shall not be liable for any damages resulting from the handling, or from the contact with the above product.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.