

HEXAMETHYLDITIN

Safety Data Sheet SNH6120

Issue date: 14/09/2015

Revision date: 24/08/2021

Version: 1.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form	: Substance
Physical state	: Solid
Substance name	: HEXAMETHYLDITIN
Product code	: SNH6120
Formula	: C ₆ H ₁₈ Sn ₂
Synonyms	: HEXAMETHYLDISTANNANE; TRIMETHYLTIN DIMER
Chemical family	: ORGANOTIN

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Use of the substance/mixture : Chemical intermediate

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet**GELEST, INC.**11 East Steel Road
Morrisville, PA 19067**USA**

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info@gelestde.com - www.gelestde.com**1.4. Emergency telephone number**

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Acute toxicity (oral), Category 2 H300

Acute toxicity (dermal), Category 2 H310

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :



GHS06

Signal word (CLP) : Danger

Hazard statements (CLP) : H300+H310 - Fatal if swallowed or in contact with skin

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Precautionary statements (CLP) : P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P330 - Rinse mouth.
P361+P364 - Take off immediately all contaminated clothing and wash it before reuse.
P310 - Immediately call a POISON CENTER or doctor.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Multi-constituent
Name : HEXAMETHYLDITIN
CAS-No. : 661-69-8
EC-No. : 211-549-2

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hexamethyldistannane	(CAS-No.) 661-69-8 (EC-No.) 211-549-2	95 – 100	Acute Tox. 2 (Oral), H300 Acute Tox. 2 (Dermal), H310
Other Organotins		0 – 5	Not classified

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label. Call a POISON CENTER/doctor.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Wash with plenty of water/.... Get immediate medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : At low levels exposure to the related compound, trimethylchlorotin, may produce coughing, headache and nausea. At higher levels trimethylchlorotin has been reported to cause cerebral edema. Human fatalities have been reported from exposure to trimethylchlorotin vapors. Laboratory animal studies have demonstrated neurotoxicity, decreases in oxidative phosphorylation associated with mitochondrial binding and inhibition of ATPase. May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : Fatal in contact with skin. Repeated exposure to this material can result in absorption through skin causing significant health hazard. May cause skin irritation. Organotins may be absorbed through the skin.

Symptoms/effects after eye contact : May cause eye irritation.

Symptoms/effects after ingestion : Fatal if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

Chronic symptoms : The related compound, 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.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physician: Application of corticosteroid creams has been effective in treating severe skin irritation. If blisters develop, they may require abrasion to promote healing.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Foam. Carbon dioxide. Dry chemical.

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Unsuitable extinguishing media : Do not use straight streams.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

5.3. Advice for firefighters

Firefighting instructions : Use water spray to cool exposed surfaces. Exercise caution when fighting any chemical fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapour and mist.

Other information : Extremely toxic. Self-contained breathing apparatus should be worn at all times to avoid inhalation.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment as described in Section 8.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapour and mist. Ground/bond container and receiving equipment. Use only in well ventilated areas.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Store in sealed containers in a manner consistent with safe-handling and regulatory requirements for a hazardous substance. Store locked up.

Incompatible materials : Oxidizing agent. Direct sunlight.

Storage area : Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Other Organotins		
Italy - Portugal - USA ACGIH	ACGIH OEL TWA	0.1 mg/m ³ as tin
USA OSHA	OSHA PEL TWA [1]	0.1 mg/m ³ as tin
Hexamethyldistannane (661-69-8)		
Italy - Portugal - USA ACGIH	ACGIH OEL TWA	0.1 mg/m ³ as tin
Italy - Portugal - USA ACGIH	ACGIH OEL STEL	0.2 mg/m ³ as tin (skin)

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8.2. Exposure controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation. Handle in an enclosing hood with exhaust ventilation. Insure that exhaust is vented properly- caustic scrubbing is recommended.

Personal protective equipment:

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:

Neoprene or nitrile rubber gloves

Eye protection:

Chemical goggles. Contact lenses should not be worn

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified combination organic vapor/acid gas (yellow cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Crystalline solid or clear liquid.
Molecular mass	: 327.59 g/mol
Colour	: White.
Odour	: characteristic.
Odour threshold	: No data available
Refractive index	: No additional information available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 23 – 24 °C
Freezing point	: No data available
Boiling point	: 85 – 88 °C @ 45 mm Hg
Flash point	: 61 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: > 1
Relative density	: 1.57
Solubility	: Insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable.

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10.3. Possibility of hazardous reactions

Direct sunlight causes slow degradation to an inorganic tin salt.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Oxidizing agent. Direct sunlight.

10.6. Hazardous decomposition products

Organic acid vapors. Tin oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Fatal if swallowed or in contact with skin. Fatal in contact with skin or if inhaled.

HEXAMETHYLDITIN (661-69-8)

ATE CLP (oral)	7.69 mg/kg bodyweight
ATE CLP (dermal)	53.8 mg/kg bodyweight

Hexamethyldistannane (661-69-8)

LD50 oral rat	7690 µg/kg 25 mg/kg
LD50 dermal rabbit	53800 µg/kg
ATE CLP (oral)	7.69 mg/kg bodyweight
ATE CLP (dermal)	53.8 mg/kg bodyweight

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: 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.
Symptoms/effects after inhalation	: At low levels exposure to the related compound, trimethylchlorotin, may produce coughing, headache and nausea. At higher levels trimethylchlorotin has been reported to cause cerebral edema. Human fatalities have been reported from exposure to trimethylchlorotin vapors. Laboratory animal studies have demonstrated neurotoxicity, decreases in oxidative phosphorylation associated with mitochondrial binding and inhibition of ATPase. May cause irritation to the respiratory tract.
Symptoms/effects after skin contact	: Fatal in contact with skin. Repeated exposure to this material can result in absorption through skin causing significant health hazard. May cause skin irritation. Organotins may be absorbed through the skin.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: Fatal if swallowed. Swallowing a small quantity of this material will result in serious health hazard.
Chronic symptoms	: The related compound, 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.

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer.

Product/Packaging disposal recommendations : Dispose of solid materials or residues at a licensed site. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number

UN-No. (ADR) : 2786

UN-No. (IMDG) : 2786

UN-No. (IATA) : 2786

UN-No. (ADN) : 2786

UN-No. (RID) : 2786

14.2. UN proper shipping name

Proper Shipping Name (ADR) : ORGANOTIN PESTICIDE, SOLID, TOXIC

Proper Shipping Name (IMDG) : ORGANOTIN PESTICIDE, SOLID, TOXIC

Proper Shipping Name (IATA) : Organotin pesticide, solid, toxic

Proper Shipping Name (ADN) : ORGANOTIN PESTICIDE, SOLID, TOXIC

Proper Shipping Name (RID) : ORGANOTIN PESTICIDE, SOLID, TOXIC

Transport document description (ADR) : UN 2786 ORGANOTIN PESTICIDE, SOLID, TOXIC (HEXAMETHYLDITIN), 6.1, II, (D/E)

Transport document description (IMDG) : UN 2786 ORGANOTIN PESTICIDE, SOLID, TOXIC (HEXAMETHYLDITIN), 6.1, II, MARINE POLLUTANT

Transport document description (IATA) : UN 2786 Organotin pesticide, solid, toxic (HEXAMETHYLDITIN), 6.1, II

Transport document description (ADN) : UN 2786 ORGANOTIN PESTICIDE, SOLID, TOXIC (HEXAMETHYLDITIN), 6.1, II

Transport document description (RID) : UN 2786 ORGANOTIN PESTICIDE, SOLID, TOXIC (HEXAMETHYLDITIN), 6.1, II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 6.1

Danger labels (ADR) : 6.1



IMDG

Transport hazard class(es) (IMDG) : 6.1

Danger labels (IMDG) : 6.1



IATA

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Transport hazard class(es) (IATA) : 6.1
Danger labels (IATA) : 6.1



ADN

Transport hazard class(es) (ADN) : 6.1
Danger labels (ADN) : 6.1



RID

Transport hazard class(es) (RID) : 6.1
Danger labels (RID) : 6.1



14.4. Packing group

Packing group (ADR) : II
Packing group (IMDG) : II
Packing group (IATA) : II
Packing group (ADN) : II
Packing group (RID) : II

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : Yes (IMDG only)
Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : T7
Special provisions (ADR) : 61, 274, 648
Limited quantities (ADR) : 500g
Excepted quantities (ADR) : E4
Packing instructions (ADR) : P002, IBC08
Special packing provisions (ADR) : B3
Mixed packing provisions (ADR) : MP10
Portable tank and bulk container instructions (ADR) : T3
Portable tank and bulk container special provisions (ADR) : TP33
Tank code (ADR) : SGAH, L4BH
Tank special provisions (ADR) : TU15, TE19
Vehicle for tank carriage : AT
Transport category (ADR) : 2
Special provisions for carriage - Packages (ADR) : V11

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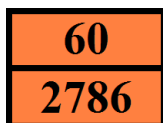
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Special provisions for carriage - Loading, unloading and handling (ADR) : CV13, CV28

Special provisions for carriage - Operation (ADR) : S9, S19

Hazard identification number (Kemler No.) : 60

Orange plates :



Tunnel restriction code (ADR) : D/E

EAC code : 2X

- Transport by sea

Special provisions (IMDG) : 61, 274

Limited quantities (IMDG) : 500 g

Excepted quantities (IMDG) : E4

Packing instructions (IMDG) : P002

IBC packing instructions (IMDG) : IBC08

IBC special provisions (IMDG) : B2, B4

Tank instructions (IMDG) : T3

Tank special provisions (IMDG) : TP33

EmS-No. (Fire) : F-A

EmS-No. (Spillage) : S-A

Stowage category (IMDG) : A

Stowage and handling (IMDG) : SW2

Properties and observations (IMDG) : Solid pesticides present a very wide range of toxic hazard. Toxic if swallowed, by skin contact or by inhalation.

- Air transport

PCA Excepted quantities (IATA) : E4

PCA Limited quantities (IATA) : Y644

PCA limited quantity max net quantity (IATA) : 1kg

PCA packing instructions (IATA) : 669

PCA max net quantity (IATA) : 25kg

CAO packing instructions (IATA) : 676

CAO max net quantity (IATA) : 100kg

Special provisions (IATA) : A3, A5

ERG code (IATA) : 6L

- Inland waterway transport

Classification code (ADN) : T7

Special provisions (ADN) : 61, 274, 648, 802

Limited quantities (ADN) : 500 g

Excepted quantities (ADN) : E4

Equipment required (ADN) : PP, EP

Number of blue cones/lights (ADN) : 2

- Rail transport

Classification code (RID) : T7

Special provisions (RID) : 61, 274, 648

Limited quantities (RID) : 500g

Excepted quantities (RID) : E4

Packing instructions (RID) : P002, IBC08

Special packing provisions (RID) : B4

Mixed packing provisions (RID) : MP10

Portable tank and bulk container instructions (RID) : T3

Portable tank and bulk container special provisions (RID) : TP33

Tank codes for RID tanks (RID) : SGAH, L4BH

Special provisions for RID tanks (RID) : TU15

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Transport category (RID)	: 2
Special provisions for carriage – Packages (RID)	: W11
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW28, CW31
Colis express (express parcels) (RID)	: CE9, CE12
Hazard identification number (RID)	: 60

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

HEXAMETHYLDITIN is not on the REACH Candidate List

HEXAMETHYLDITIN is not on the REACH Annex XIV List

HEXAMETHYLDITIN is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

HEXAMETHYLDITIN is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

Germany

Regulatory reference : Not classified according to Regulation Governing Systems for Handling Substances Hazardous to Waters (AwSV)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : The substance is not listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : The substance is not listed

Denmark

Class for fire hazard : Class III-1

Store unit : 50 liter

Classification remarks : Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Abbreviations and acronyms:

Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor

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Other information : Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

Acute Tox. 2 (Dermal)	Acute toxicity (dermal), Category 2
Acute Tox. 2 (Oral)	Acute toxicity (oral), Category 2
H300	Fatal if swallowed.
H310	Fatal in contact with skin.

SDS EU (REACH Annex II) - Custom

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

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