### Printing date 07/19/2021

Reviewed on 07/14/2021

# **1** Identification

- · Product name
- · Trade name: 2,2,6,6-Tetramethyl-3,5-heptanedionatothallium(I), 99% [Tl(TMHD)]
- Item number: 81-1000
- CAS Number: 133892-72-5
- · Details of the supplier of the safety data sheet
- Manufacturer/Supplier: Strem Chemicals, Inc.
   7 Mulliken Way NEWBURYPORT, MA 01950 USA info@strem.com
- Information department: Technical Department
  Emergency telephone number: EMERGENCY: CHEMTREC: + 1 (800) 424-9300
- During normal opening times: +1 (978) 499-1600

# 2 Hazard(s) identification

· Classification of the substance or mixture



GHS06 Skull and crossbones

Acute Tox. 2 H330 Fatal if inhaled.

· Label elements

· GHS label elements

- The substance is classified and labeled according to the Globally Harmonized System (GHS).
- Hazard pictograms

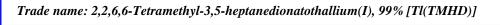


#### · Signal word Danger · Hazard statements H330 Fatal if inhaled. · Precautionary statements P231 Handle under inert gas. P284 [In case of inadequate ventilation] wear respiratory protection. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P422 Store contents under inert gas. Dispose of contents/container in accordance with local/regional/national/international P501 regulations. (Contd. on page 2)

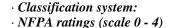


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- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

# 3 Composition/information on ingredients

- · Chemical characterization: Substances
- · CAS No. Description
- 133892-72-5 2,2,6,6-Tetramethyl-3,5-heptanedionatothallium(I)

# 4 First-aid measures

- · Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

- Remove breathing apparatus only after contaminated clothing have been completely removed.
- In case of irregular breathing or respiratory arrest provide artificial respiration.
- · After inhalation:
- Supply fresh air or oxygen; call for doctor.
- In case of unconsciousness place patient stably in side position for transportation.
- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: If symptoms persist consult doctor.
- · Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- *Indication of any immediate medical attention and special treatment needed No further relevant information available.*

# **5** Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- $\cdot$  Special hazards arising from the substance or mixture
- During heating or in case of fire poisonous gases are produced.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

(Contd. on page 3)

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CHEMICALS.

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#### Trade name: 2,2,6,6-Tetramethyl-3,5-heptanedionatothallium(I), 99% [Tl(TMHD)]

(Contd. of page 2)

6 Accidental release measures
· Personal precautions, protective equipment and emergency procedures Mount respiratory protective device.
Environmental precautions:
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
• Methods and material for containment and cleaning up:
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
· Protective Action Criteria for Chemicals
· PAC-1:
Substance is not listed.
· PAC-2:
Substance is not listed.
· PAC-3:
Substance is not listed.

#### 7 Handling and storage

· Handling:

· Precautions for safe handling

Thorough dedusting.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

· Information about protection against explosions and fires: Keep respiratory protective device available.

· Conditions for safe storage, including any incompatibilities

· Storage:

• Requirements to be met by storerooms and receptacles: No special requirements.

- Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

# 8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7.

· Control parameters

- · Components with limit values that require monitoring at the workplace: Not required.
- · Additional information: The lists that were valid during the creation were used as basis.

· Exposure controls

- · Personal protective equipment:
- General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Store protective clothing separately.

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Trade name: 2,2,6,6-Tetramethyl-3,5-heptanedionatothallium(I), 99% [Tl(TMHD)]

• *Breathing equipment:* A NIOSH approved respirator in accordance with 29 CFR 1910.134. • *Protection of hands:* 



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

- Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation Material of gloves
- The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Safety glasses

# 9 Physical and chemical properties

General Information Appearance:		
Form:	Crystalline	
Color:	Whitish	
Odor:	Odorless	
Odor threshold:	Not determined.	
pH-value:	Not applicable.	
Change in condition		
Melting point/Melting range:	Undetermined.	
<b>Boiling point/Boiling range:</b>	Undetermined.	
Flash point:	Not applicable.	
Flammability (solid, gaseous):	Not determined.	
Ignition temperature:		
Decomposition temperature:	Not determined.	
Auto igniting:	Not determined.	
Danger of explosion:	Product does not present an explosion hazard.	
Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
Vapor pressure:	Not applicable.	
Density:	Not determined.	
Relative density	Not determined.	
Vapor density	Not applicable.	
Evaporation rate	Not applicable.	

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		(Contd. of page
· Solubility in / Miscibility with		
Water:	Insoluble.	
· Partition coefficient (n-octan	ol/water): Not determined.	
· Viscosity:		
Dynamic:	Not applicable.	
Kinematic:	Not applicable.	
· Solvent content:		
Organic solvents:	0.0 %	
VOC content:	0.0 g/l / 0.00 lb/gl	
Solids content:	100.0 %	
• Other information	No further relevant information available.	

### **10 Stability and reactivity**

- *Reactivity* No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

# **11 Toxicological information**

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- · Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer)

Substance is not listed.

· NTP (National Toxicology Program)

Substance is not listed.

- · OSHA-Ca (Occupational Safety & Health Administration)
- Substance is not listed.

# **12 Ecological information**

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.

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- $\cdot$  Mobility in soil No further relevant information available.
- Additional ecological information:
- General notes: Not known to be hazardous to water.
- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- Other adverse effects No further relevant information available.

### **13 Disposal considerations**

· Waste treatment methods

- *Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

UN-Number DOT, IMDG, IATA	UN1707
UN proper shipping name	
DOT	Thallium compounds, n.o.s.
IMDG	THALLIUM COMPOUND, N.O.S., MARINE POLLUTANT
IATA	THALLIUM COMPOUND, N.O.S.
Transport hazard class(es)	
DOT	
TOXIC 6	
Class	6.1 Toxic substances
Label	6.1
IMDG	
Class	6.1 Toxic substances
Label	6.1
IATA	
6	
Class	6.1 Toxic substances
Label	6.1





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#### Trade name: 2,2,6,6-Tetramethyl-3,5-heptanedionatothallium(I), 99% [Tl(TMHD)]

	(Contd. of page
Packing group	
DOT, IMDG, IATA	Π
Environmental hazards:	
Marine pollutant:	No
_	Yes (DOT)
	Symbol (fish and tree)
Special precautions for user	Not applicable.
ÊMS Number:	F-A,Ŝ-A
Stowage Category	A
Transport in bulk according to Annex	II of
MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
DOT	
Quantity limitations	On passenger aircraft/rail: 25 kg
	On cargo aircraft only: 100 kg
IMDG	
Limited quantities (LQ)	.5kg
Excepted quantities $(EQ)$	Code: E4
· · · · · ·	Maximum net quantity per inner packaging: 1 g
	Maximum net quantity per outer packaging: 500 g
UN "Model Regulation":	UN 1707 THALLIUM COMPOUNDS, N.O.S., 6.1, II

# **15 Regulatory information**

- $\cdot$  Safety, health and environmental regulations/legislation specific for the substance or mixture  $\cdot$  Sara
- · Section 355 (extremely hazardous substances):
- Substance is not listed.
- · Section 313 (Specific toxic chemical listings):
- Substance is not listed.
- · TSCA (Toxic Substances Control Act):
- Substance is not listed.

· Proposition 65

- · Chemicals known to cause cancer:
- Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females:
- Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males:
- Substance is not listed.
- · Chemicals known to cause developmental toxicity:
- Substance is not listed.

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(Contd. of page 7)

· Carcinogenic categories	•	Carcino	genic	categories
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· EPA (Environmental Protection Agency)

Substance is not listed.

• TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

· GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS).

• Hazard pictograms



011500	
· Signal word Da	anger
· Hazard statem	ents
H330 Fatal if it	nhaled.
· Precautionary	statements
P231	Handle under inert gas.
P284	[In case of inadequate ventilation] wear respiratory protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P305+P351+P	338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P422	Store contents under inert gas.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

# **16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Technical Department.

• Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

<sup>·</sup> Contact: Technical Director

<sup>·</sup> Date of preparation / last revision 07/19/2021 / -

<sup>-</sup>ι

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Trade name: 2,2,6,6-Tetramethyl-3,5-heptanedionatothallium(I), 99% [Tl(TMHD)]

PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Acute Tox. 2: Acute toxicity – Category 2 (Contd. of page 8)

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