

<a href="#">Thulium Sulfate</a>	<a href="#">Pricing &gt;</a>
<a href="#">Thulium Sulfate Octahydrate</a>	<a href="#">Pricing &gt;</a>
<a href="#">Thulium Sulfate Solution</a>	<a href="#">Pricing &gt;</a>

Linear Formula	Tm <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>
Pubchem CID	16211495
MDL Number	MFCD00149881
EC No.	243-996-4
IUPAC Name	Thulium(+3) cation trisulfate hydrate
Beilstein/Reaxys No.	N/A
SMILES	[Tm+3].[Tm+3].[O-]S(=O)(=O)[O-].[O-]S(=O)(=O)[O-].[O-]S(=O)(=O)[O-]
Inchl Identifier	InChI=1S/3H2O4.S.H2O.2Tm/c3*1-5(2,3)4::;/h3*(H2,1,2,3,4);1H2::/q::;2*+3/p-6
Inchl Key	UHRIULLMPAUAOV-UHFFFAOYSA-H

Signal Word	Warning
Hazard Statements	H315-H319-H335
Hazard Codes	Xi
Risk Codes	36/37/38
Safety Statements	26-37/39
RTECS Number	N/A
Transport Information	N/A
WGK Germany	3

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## SAFETY DATA SHEET

Date Accessed: 04/25/2024

Date Revised: 01/15/2022

### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #13778-40-0

**Relevant identified uses of the substance:**  
Scientific research and development

Supplier details:  
American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351

Emergency telephone number:  
Domestic, North America +1 800-424-9300  
International +1 703-527-3887

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## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture in  
accordance with 29 CFR 1910 (OSHA HCS)  
GHS07

Skin Irrit. 2 H315 Causes skin irritation.  
Eye Irrit. 2A H319 Causes serious eye irritation.  
STOT SE 3 H335 May cause respiratory irritation.  
Hazards not otherwise classified No data available  
GHS label elements, including precautionary  
statements



Hazard pictograms

GHS07

Signal word Warning

Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statements

P261 Avoid breathing

dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye  
protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with  
water for several minutes. Remove contact lenses, if  
present and easy to do. Continue rinsing.

P304+P340 IF INHALED: Remove person to fresh air  
and keep comfortable for breathing.

P405 Store locked up.

P501 Dispose of contents/container in accordance  
with local/regional/national/international regulations.

WHMIS classification

D2B - Toxic material causing other toxic effects

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH

FIRE

REACTIVITY

1

0

1

Health (acute effects) = 1

Flammability = 0

Physical Hazard = 1

Other hazards  
Results of PBT and vPvB assessment  
PBT: N/A  
vPvB: N/A

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### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances  
CAS No. / Substance Name:  
13778-40-0 Thulium(III) sulfate octahydrate  
Identification number(s):  
EC number: 243-996-4

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### **SECTION 4. FIRST AID MEASURES**

Description of first aid measures  
If inhaled:  
Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm.  
Seek immediate medical advice.  
In case of skin contact:  
Immediately wash with soap and water; rinse thoroughly.  
Seek immediate medical advice.  
In case of eye contact:  
Rinse opened eye for several minutes under running water. Consult a physician.  
If swallowed:  
Seek medical treatment.  
Information for doctor  
Most important symptoms and effects, both acute and delayed:  
No data available  
Indication of any immediate medical attention and special treatment needed:  
No data available

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### **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media  
Suitable extinguishing agents Product is not flammable. Use fire-fighting measures that suit the surrounding fire.  
Special hazards arising from the substance or mixture  
If this product is involved in a fire, the following can be released:  
Sulfur oxides (SO<sub>x</sub>)  
Metal oxide fume  
Advice for firefighters

Protective equipment:  
Wear self-contained respirator.  
Wear fully protective impervious suit.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures  
Use personal protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation  
Environmental precautions: Do not allow material to be released to the environment without official permits.  
Methods and materials for containment and cleanup:  
Ensure adequate ventilation.  
Prevention of secondary hazards: No special measures required.  
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.

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## **SECTION 7. HANDLING AND STORAGE**

Handling  
Precautions for safe handling  
Keep container tightly sealed.  
Store in cool, dry place in tightly closed containers.  
Ensure good ventilation at the workplace.  
Information about protection against explosions and fires: The product is not flammable  
Conditions for safe storage, including any incompatibilities  
Requirements to be met by storerooms and receptacles: No special requirements.  
Information about storage in one common storage facility:  
Store away from oxidizing agents.  
Store away from water/moisture.  
Further information about storage conditions:  
This product is hygroscopic.  
Store under dry inert gas.  
Keep container tightly sealed.  
Store in cool, dry conditions in well-sealed containers.  
Protect from humidity and water.  
Specific end use(s) No data available

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace: Not required.

Additional information: No data

Exposure controls

Personal protective equipment

Follow typical protective and hygienic practices for handling chemicals.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

Breathing equipment: Use suitable respirator when high concentrations are present.

Protection of hands:

Impervious gloves

Inspect gloves prior to use.

The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

Penetration time of glove material (in minutes) No data available

Eye protection: Safety glasses

Body protection: Protective work clothing.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties

Appearance:

Form: Powder

Color: Light green

Odor: No data available

Odor threshold: No data available.

pH: N/A

Melting point/Melting range: No data available

Boiling point/Boiling range: No data available

Sublimation temperature / start: No data available

Flash point: N/A

Flammability (solid, gas) No data available.

Ignition temperature: No data available  
Decomposition temperature: No data available  
Autoignition: No data available.  
Danger of explosion: Product does not present an explosion hazard.  
Explosion limits:  
Lower: No data available  
Upper: No data available  
Vapor pressure: N/A  
Density: No data available  
Relative density: No data available.  
Vapor density: N/A  
Evaporation rate: N/A  
Solubility in / Miscibility with  
Water: No data available  
Partition coefficient (n-octanol/water): No data available.  
Viscosity:  
Dynamic: N/A  
Kinematic: N/A  
Other information: No data available

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## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity: No data available  
Chemical stability: Stable under recommended storage conditions.  
Thermal decomposition / conditions to be avoided:  
Decomposition will not occur if used and stored according to specifications.  
Possibility of hazardous reactions: No dangerous reactions known  
Conditions to avoid: No data available  
Incompatible materials:  
Oxidizing agents  
Water/moisture  
Hazardous decomposition products:  
Sulfur oxides (SO<sub>x</sub>)  
Metal oxide fume

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects  
Acute toxicity: No effects known.  
LD/LC50 values that are relevant for classification: No data  
Skin irritation or corrosion: Causes skin irritation.  
Eye irritation or corrosion: Causes serious eye irritation.  
Sensitization: No sensitizing effects known.

Germ cell mutagenicity: No effects known.  
Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.  
Reproductive toxicity: No effects known.  
Specific target organ system toxicity - repeated exposure: No effects known.  
Specific target organ system toxicity - single exposure: May cause respiratory irritation.  
Aspiration hazard: No effects known.  
Subacute to chronic toxicity:  
Lanthanons can cause delayed blood clotting leading to hemorrhages. Exposure may also lead to sensitivity to heat, itching, increased awareness of odor and taste, and liver damage.  
Subacute to chronic toxicity: No effects known.  
Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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## **SECTION 12. ECOLOGICAL INFORMATION**

### **Toxicity**

Aquatic toxicity: No data available

Persistence and degradability No data available

Bioaccumulative potential No data available

Mobility in soil No data available

Additional ecological information:

Do not allow material to be released to the environment without official permits.

Do not allow undiluted product or large quantities to reach groundwater, water courses, or sewage systems.

Avoid transfer into the environment.

Results of PBT and vPvB assessment

PBT: N/A

vPvB: N/A

Other adverse effects No data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

### **Waste treatment methods**

Recommendation Consult official regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

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## SECTION 14. TRANSPORT INFORMATION

Not a hazardous material for transportation.

UN-Number

DOT, IMDG, IATA None

UN proper shipping name

DOT, IMDG, IATA None

Transport hazard class(es)

DOT, ADR, IMDG, IATA

Class None

Packing group

DOT, IMDG, IATA None

Environmental hazards: N/A

Special precautions for user N/A

Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code N/A

Transport/Additional information: Not dangerous  
according to the above specifications.

DOT

Marine Pollutant (DOT): No

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## SECTION 15. REGULATORY INFORMATION

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

GHS label elements, including precautionary  
statements

Hazard pictograms

GHS07

Signal word Warning

Hazard statements

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present and easy to do. Continue rinsing.

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and keep comfortable for breathing.

P405 Store locked up.

P501 Dispose of contents/container in accordance  
with local/regional/national/international regulations.

National regulations

All components of this product are listed in the U.S.



Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.  
All components of this product are listed on the Canadian Non-Domestic Substances List (NDSL).  
SARA Section 313 (specific toxic chemical listings) Substance is not listed.  
California Proposition 65  
Prop 65 - Chemicals known to cause cancer Substance is not listed.  
Prop 65 - Developmental toxicity Substance is not listed.  
Prop 65 - Developmental toxicity, female Substance is not listed.  
Prop 65 - Developmental toxicity, male Substance is not listed.  
Information about limitation of use: For use only by technically qualified individuals.  
Other regulations, limitations and prohibitive regulations  
Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.  
Substance is not listed.  
The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.  
Substance is not listed.  
Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.  
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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## **16. OTHER INFORMATION**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.

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