

Safety Data Sheet per OSHA HazCom 2012

1 Identification Product identifier Product name: Thulium(III) sulfate octahydrate Stock number: A17296 CAS Number: 13778-40-0 EC number: 243-996-4 Relevant identified uses of the substance or mixture and uses advised against. Identified use: SU24 Scientific research and development Details of the supplier of the safety data sheet Manufacturer/Supplier: Alfa Aesar Thermo Fisher Scientific Chemicals, Inc. Inerrito Fisher Scheman C. 30 Bond Street Ward Hill, MA 01835-8099 Tel: 800-343-0660 Fax: 800-322-4757 Email: tech @alfa.com www.alfa.com Information Department: Health, Safety and Environmental Department Emergency telephone number: During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789. 2 Hazard(s) 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 information known. Label elements GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) 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/vapours/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. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations. P405 WHMIS classification D2B - Toxic material causing other toxic effects Ţ Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System) Health (acute effects) = 10 Flammàbility = 0 TIVITY 1 Physical Hazard = 1 Other hazards Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable 3 Composition/information on ingredients Chemical characterization: Substances CAS# Description: 13778-40-0 Thulium(III) sulfate octahydrate Identification number(s): EC number: 243-996-4 4 First-aid measures Description of first aid measures After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice. After skin contact Immediately wash with water and soap and rinse thoroughly. (Contd. on page 2)

		viewed 011 03/10/2009
Product name: Thulium(III) sulfa	te octahydrate	
Seek immediate medical advice.		(Contd. of page 1)
	ve for several minutes under running water. Then consult a doctor.	
Information for doctor	fects, both acute and delayed No further relevant information available.	
Indication of any immediate medi	ical attention and special treatment needed No further relevant information available.	
5 Fire-fighting measures		
Extinguishing media Suitable extinguishing agents Pro	oduct 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, th Sulfur oxides (SOx) Metal oxide fume		
Advice for firefighters Protective equipment:		
Wear self-contained respirator. Wear fully protective impervious su	it.	
6 Accidental release measures		
Personal precautions, protective	equipment and emergency procedures	
Wear protective equipment. Keep u Ensure adequate ventilation		
Environmental precautions: Do n Methods and material for contain	ot allow material to be released to the environment without proper governmental permits. ment and cleaning up: Ensure adequate ventilation.	
Prevention of secondary hazards Reference to other sections		
See Section 7 for information on sa See Section 8 for information on pe	ersonal protection equipment.	
See Section 13 for disposal informa	tion.	
7 Handling and storage		
Handling Precautions for safe handling		
Keep container tightly sealed. Store in cool, dry place in tightly clo	sed containers.	
Ensure good ventilation at the work Information about protection aga	place. inst explosions and fires: The product is not flammable	
Conditions for safe storage, inclu Storage	iding any incompatibilities	
Requirements to be met by store	rooms and receptacles: No special requirements.	
Information about storage in one Store away from oxidizing agents.	common storage racinty.	
Store away from water/moisture.	e conditions:	
This product is hygroscopic. Store under dry inert gas.		
Keep container tightly sealed. Store in cool, dry conditions in well Protect from humidity and water.	sealed containers.	
Specific end use(s) No further rele	evant information available.	
8 Exposure controls/personal p		
Additional information about des	ign of technical systems: lood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.	
Control parameters		
Components with limit values that Additional information: No data	at require monitoring at the workplace: Not required.	
Exposure controls Personal protective equipment		
General protective and hygienic i	measures for handling chemicals should be followed.	
Keep away from foodstuffs, beverag Remove all soiled and contaminate	ges and feed.	
Wash hands before breaks and at t Avoid contact with the eyes and ski	he end of work.	
Maintain an ergonomically appropria	ate working environment.	
Protection of hands: Impervious gloves	e respirator when high concentrations are present.	
Check protective gloves prior to eac	ch use for their proper condition. only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.	
Penetration time of glove materia Eye protection: Safety glasses	il (in minutes) Not determined	
Body protection: Protective work of	clothing.	
9 Physical and chemical proper	rties	
Information on basic physical and General Information	d chemical properties	
Appearance: Form:	Powder	
Color: Odor:	Light green Not determined	
Odor threshold:	Not determined.	
pH-value: Change in condition	Not applicable.	
Melting point/Melting range:	Not determined	
		(Contd. on page 3, USA -

Product name: Thulium(III) sulfate octahydrate

Const. or page 1 Const. or p	Product name: Thulium(III) sulfate o	ctahydrate		
Sublimation temperature / start: Mol applicable Print Dolling Mol applicable Auto granting: Mol applicable Auto granting: Mol applicable Auto granting: Product does not present an explosion hazard. Despect explosion: Product does not present an explosion hazard. Despect explosion: Product does not present an explosion hazard. Despect of explosion: Not determined Vector of explosion: Not dependence Vector of explosion: Not dependence Other information Not dependence Vector of explosion: Not dependence <th></th> <th>(Contd. of page 2)</th>		(Contd. of page 2)		
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	Reviewed on 03/10/2003
Product name: Thulium(III) sulfate octahydrate	
•	(Contd. of page 3
Transport hazard class(es)	Conta. of page 3
DOT, ADR, IMDG, IATA Class	None
Packing group DOT, IMDG, IATA	None
Environmental hazards:	Not applicable.
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and	I the IBC Code Not applicable.
Transport/Additional information:	Not dangerous according to the above specifications.
DOT Marine Pollutant (DOT):	No
P304+P340 IF INHALED: Remove person to fresh air and I P405 Store locked up. P501 Dispose of contents/container in accordance w National regulations All components of this product are listed in the U.S. Environmenta All components of this product are listed on the Canadian Non-Do SARA Section 313 (specific toxic chemical listings) Substance California Proposition 65 Prop 65 - Chemicals known to cause cancer Substance is not I Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed.	pray. protection/face protection. protection/face protection. protection
information to ensure proper use and protect the health and safety	ther information gathered by them, and should make independent judgement of suitability of this y of employees. This information is furnished without warranty, and any use of the product not in ion with any other product or process, is the responsibility of the user.
Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/24/2015 / - Abbreviations and acronyms: RID: Règlement international concernant le transport des marchandises dangereuses p IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO, INDG: International Maritime Code for Dangerous Goods DOT: US Department of Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) HMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information System (Canada) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent LD50: Lethal dose, 50 percent LC60: Accouptional Safety and Health Administration (USA) NTP: National Toxicology Program (USA) NTP: National Toxicology Program (USA) NTP: National Agency for Research on Cancer EPA: Environmental Agency for Research on Cancer EPA: Environmental Protection Agency (USA)	par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ion" (IATA))) USA