

Issuing Date 12/15/2011

Revision Number 0

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name THORIUM NITRATE (0.0005M) MSDS FOR ISK-6158 & OTHER-6158
Product Code(s) 6158
Recommended Use Test kit reagent. Laboratory chemicals. Industrial (not for food or food contact use).
Company LaMotte Company, Inc.
 802 Washington Avenue
 P.O. Box 329
 Chestertown, MD 21620
 USA
Emergency Telephone Number 24 Hour Emergency Number (CHEM-TEL):
 USA, Canada, Puerto Rico 1-800-255-3924
 Outside North American Continent (Call collect) 813-248-0585

2. HAZARDS IDENTIFICATION
Emergency Overview

May be harmful if swallowed

Appearance Clear, colorless

Physical State Liquid

Odor Odorless

Potential Health Effects
Principle Routes of Exposure Ingestion

Acute Toxicity
Eyes

May cause irritation.

Skin

May cause irritation.

Inhalation

May be harmful if inhaled. May cause irritation of respiratory tract and mucous membranes.

Ingestion

May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects

No known effect based on information supplied

Aggravated Medical Conditions

Hypersensitivity may occur in those with preexisting skin disorders. Respiratory disorders. Preexisting eye disorders.

3. COMPOSITION/INFORMATION ON INGREDIENTS
Chemical Family Metal nitrate salts.

Chemical Name	CAS-No	Weight %
Thorium (IV) nitrate, tetrahydrate	13470-07-0	0.025
Water	7732-18-5	to 100%

WARNING! This product contains a chemical known to the State of California to cause cancer.

4. FIRST AID MEASURES

General Advice	Do not get in eyes, on skin, or on clothing. Show this safety data sheet to the doctor in attendance.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek immediate medical attention/advice.
Skin Contact	Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Get medical attention if irritation persists.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and contact emergency personnel. Call a physician immediately.
Ingestion	Immediate medical attention is required. Drink plenty of water. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person.
Protection of First-aiders	Use personal protective equipment. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

5. FIRE-FIGHTING MEASURES

Flash Point	Not applicable			
Suitable Extinguishing Media	CO ₂ (except for cyanides), dry chemical, dry sand, alcohol-resistant foam.			
Explosion Data				Physical and Chemical Hazards -
NFPA	Health Hazard 1	Flammability 0	Stability 0	
HMIS	Health Hazard 1	Flammability 0	Stability 0	

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Refer to Section 8. Use personal protective equipment. Avoid contact with skin, eyes and inhalation of vapors.
Methods for Containment	Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).
Methods for Cleaning Up	After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Handling	Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not ingest. Do not eat, drink, or smoke when using this product.
Storage	Keep containers tightly closed in a dry, cool, and well-ventilated place. Keep away from heat. Keep away from direct sunlight. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Thorium (IV) nitrate, tetrahydrate 13470-07-0	None Known	None Known	None Known

Water 7732-18-5	None Known	None Known	None Known
--------------------	------------	------------	------------

Engineering Measures Showers
 Eyewash stations
 Ventilation systems.

Personal Protective Equipment

Eye/Face Protection Safety glasses with side-shields.
Skin and Body Protection Wear protective gloves/clothing. Gloves & Lab Coat.
Respiratory Protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, colorless	Odor	Odorless
Physical State	Liquid	pH	3
Flash Point	Not applicable	Boiling Point/Range	No data available

Vapor Pressure	No data available	Vapor Density	No data available
-----------------------	-------------------	----------------------	-------------------

10. STABILITY AND REACTIVITY

Stability Stable under normal conditions of use and storage.

Incompatible Products Strong oxidizing agents. Strong reducing agents. Organic material.

Conditions to Avoid Excessive heat. Incompatible products.

Hazardous Decomposition Products Nitrogen oxides (NOx). Thorium salts.

Hazardous Polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information 6158 is a very dilute solution of Thorium nitrate. Specific activity of 6158 is 0.000012 microcuries/gram. (Regulatory level is greater than 0.002 microcuries/gram. 6158 falls far below the regulatory level and is not expected to be toxic).

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Thorium (IV) nitrate, tetrahydrate	None Known	None Known	None Known
Water	90 mL/kg (Rat)	None Known	None Known

Chronic Toxicity

Chronic Toxicity No known effect based on information supplied.

Chemical Name	ACGIH	IARC	NTP	OSHA
---------------	-------	------	-----	------

Thorium (IV) nitrate, tetrahydrate	None Known	None Known	None Known	None Known
Water	None Known	None Known	None Known	None Known

Endocrine Disruptor Information

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Thorium (IV) nitrate, tetrahydrate	None Known	None Known	None Known
Water	None Known	None Known	None Known

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Thorium (IV) nitrate, tetrahydrate	None Known	None Known	None Known	None Known
Water	None Known	None Known	None Known	None Known

Persistence and Degradability No information available.

Bioaccumulation/Accumulation No information available.

Chemical Name	Log Pow
Thorium (IV) nitrate, tetrahydrate	None Known
Water	None Known

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose according to federal, state, and local regulations.

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Thorium (IV) nitrate, tetrahydrate - 13470-07-0	None Known	None Known	None Known	None Known
Water - 7732-18-5	None Known	None Known	None Known	None Known

14. TRANSPORT INFORMATION

DOT Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

Component	TSCA	DSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Thorium (IV) nitrate, tetrahydrate 13470-07-0 (0.025)	TSCA	DSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Water 7732-18-5 (to 100%)	Present	X	X	ENCS	X	KE-35400	X	X

U.S. Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Thorium (IV) nitrate, tetrahydrate	13470-07-0	0.025	1.0
Water	7732-18-5	to 100%	None Known

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Thorium (IV) nitrate, tetrahydrate 13470-07-0 (0.025)	None Known	None Known	None Known	None Known
Water 7732-18-5 (to 100%)	None Known	None Known	None Known	None Known

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any HAPs.

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Thorium (IV) nitrate, tetrahydrate	13470-07-0	0.025	None Known	None Known	None Known	None Known
Water	7732-18-5	to 100%	None Known	None Known	None Known	None Known

CERCLA

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Thorium (IV) nitrate, tetrahydrate	None Known	None Known
Water	None Known	None Known

U.S. State Regulations**California Proposition 65**

WARNING! This product contains a chemical known to the State of California to cause cancer

Chemical Name	CAS-No	California Prop. 65
Thorium (IV) nitrate, tetrahydrate	13470-07-0	None Known
Water	7732-18-5	None Known

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Thorium (IV) nitrate, tetrahydrate	None Known	None Known	None Known	None Known	None Known
Water	None Known	None Known	None Known	None Known	None Known

International Regulations

Mexico - Grade

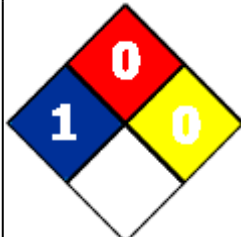

Chemical Name	Carcinogen Status	Exposure Limits
Thorium (IV) nitrate, tetrahydrate	None Known	None Known
Water	None Known	None Known

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Component	WHMIS Hazard Class
Thorium (IV) nitrate, tetrahydrate 13470-07-0 (0.025)	Not determined
Water 7732-18-5 (to 100%)	Uncontrolled product according to WHMIS classification criteria

16. OTHER INFORMATION

NFPA	HMIS	PPE	Transport Symbol						
	<table border="1"> <tr> <td>Health Hazard</td> <td style="text-align: center;">1</td> </tr> <tr> <td>Fire Hazard</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Reactivity</td> <td style="text-align: center;">0</td> </tr> </table>	Health Hazard	1	Fire Hazard	0	Reactivity	0		
Health Hazard	1								
Fire Hazard	0								
Reactivity	0								

Prepared By Regulatory Affairs Department

Issuing Date 12/15/2011

Revision Date 15-Dec-2011

Revision Note
Initial Release

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS