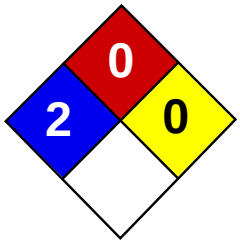

Health	2
Fire	0
Reactivity	0
Personal Protection	X

Material Safety Data Sheet
Thorium nitrate MSDS

Section 1: Chemical Product and Company Identification

Product Name: Thorium nitrate

Catalog Codes:

CAS#: 13470-07-0; 13823-29-5 (anhydrous)

RTECS: XO6825000

TSCA: TSCA 8(b) inventory: CAS no. 13470-07-0 is not TCSA listed because it is a hydrate. CAS no. 13823-29-5 is TSCA listed

CI#: Not available.

Synonym: Nitric acid, thorium (4+) salt tetrahydrate; Thorium tetranitrate tetrahydrate; Thorium (4+) nitrate tetrahydrate

Chemical Name: Thorium (IV) Nitrate tetrahydrate

Chemical Formula: Th(NO3)4.4H2O

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Thorium nitrate	13470-07-0;	100
	13823-29-5	
	(anhydrous)	

Toxicological Data on Ingredients: Thorium nitrate ahydrous (CAS no. 13823-29-5): ORAL (LD50): Acute: 1760 mg/kg [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, lungs, bone marrow. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Cold water may be used. Get medical attention. Seek medical attention in case of eye contact with a radioactive material.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention in case of skin contact with a radioactive material.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention in case of inhalation of a radioactive material.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: organic materials. combustible materials.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. Slightly explosive in presence of organic materials.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards:
Oxidizing agent; may ignite oxidizable materials. Contact with combustible or organic materials may cause fire. It increases the flammability of any combustible substance.

Special Remarks on Explosion Hazards: In contact with easily oxidizable substances, it may react rapidly enough to cause violent combustion or explosion.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Radioactive material. Oxidizing material. Stop leak if without risk. Do not attempt recovery actions unless for rescue purposes. Do not touch damaged container or spilled material. Do not clean-up or dispose except under supervision of a specialist. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Keep away from combustible material.. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as combustible materials, organic materials.

Storage:
Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalies, reducing agents and combustibles. See NFPA 43A, Code for the Storage of Liquid and Solid Oxidizers.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Deliquescent solid.)

Odor: Odorless.

Taste: Not available.

Molecular Weight: 552.12 g/mole

Color: White.

pH (1% soln/water): Not available.

Boiling Point: Not available.

Melting Point: Decomposition temperature: 500°C (932°F)

Critical Temperature: Not available.

Specific Gravity: Not available.

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water.

Solubility:
Easily soluble in cold water. Very soluble in alcohol (ethanol), acids.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials

Incompatibility with various substances: Thorium Nitrate is an oxidizing material. Reactive with combustible materials, organic materials.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 1760 mg/kg [Mouse].

Chronic Effects on Humans: May cause damage to the following organs: kidneys, lungs, bone marrow.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:
May cause adverse reproductive effects. Thorium reproductive effects, if they occur, are likely to be mediated by ionizing radiation. Thorium is a suspected carcinogen. Thorium Nitrate emits radiation which could cause cancer, but no evidence of cancer has yet been found. May affect genetic material (mutagenic)

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: It can irritate the skin causing a rash, or burning feeling on contact. Eyes: It can irritate the eyes. Inhalation: It can irritate the respiratory tract (nose, throat). Ingestion: It may cause nausea, vomiting, dizziness, abdominal cramps, ulceration or bleeding from the small intestine, bloody diarrhea, weakness, general depression, headache, mental impairment. Chronic Potential Health Effects: Skin: May cause dermatitis. Ingestion and Inhalation: Repeated or prolonged exposure may affect the liver, kidneys, lungs, bone marrow. It may reduce the ability of the bone marrow to make blood cells. Prolonged or repeated inhalation may cause scarring of the lungs.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 5.1: Oxidizing material.

Identification: : Nitrate, inorganic, n.o.s (Thorium Nitrate) UNNA: 1477 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Thorium nitrate (listed as Radionuclides) California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Thorium nitrate (CAS no. 13823-29-5) Connecticut hazardous material survey.: Thorium nitrate (CAS no. 13823-29-5) Rhode Island RTK hazardous substances: Thorium nitrate (CAS no. 13823-29-5) Pennsylvania RTK: Thorium nitrate (CAS no. 13823-29-5) Massachusetts RTK: Thorium nitrate (CAS no. 13823-29-5) New Jersey: Thorium nitrate (CAS no. 13823-29-5) CAS no. 13470-07-0 is not TCSA listed because it is a hydrate. CAS no. 13823-29-5 is TSCA listed.

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS C: Oxidizing material. CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R8- Contact with combustible material may cause fire. R36/38- Irritating to eyes and skin. R45- May cause cancer. S17- Keep away from combustible material. S36/37- Wear suitable protective clothing and gloves. S46- If swallowed, seek medical advice immediately and show this container or label.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 0

Reactivity: 0

Personal Protection: x

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 12:19 PM

Last Updated: 05/21/2013 12:00 PM

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