



1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: R-202 Thorium Nitrate Solution
Description: Test Reagent
Suggested Use: Industrial Water Treatment
Restrictions on Use: Not Determined
Supplier: Advanced Chemical Technology, Inc.
8728 Utica Avenue
Rancho Cucamonga, CA 91730
Telephone: 1-909-980-4556 or 1-800-527-9607
Fax: 1-909-980-9366
Emergency Phone: 1-800-255-3924 (CHEMTEL)

2. HAZARDS IDENTIFICATION

Classification

GHS Classification: Serious Eye Irritation (Category 2A)

GHS Label Elements

Pictogram:



Signal Word: Warning

Hazard Statements: H316: Causes mild skin irritation
H319: Causes serious eye irritation

Precautionary Statements: P264: Wash hands thoroughly after handling.
P 273: Avoid release to the environment.
P280: Wear protective gloves/ protective clothing/ eye 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.
P337+P313: If eye irritation persists: Get medical attention/advice.
P332+P313: If skin irritation occurs: Get medical advice/attention.
P501 - Dispose of contents/container to comply with local, state and federal regulations.

HMIS Classification: Health Hazard: 1
Flammability: 0
Physical Hazards: 0

NFPA Rating: Health Hazard: 1
Fire: 0
Reactivity Hazard: 0

Potential Health Effects

Inhalation: May cause irritation.



Skin: Mildly irritating may produce reddening on moist skin.
Eyes: May cause eye irritation.
Ingestion: Absorption through gastrointestinal tract is notably slight. With large ingestion, abdominal pain, dizziness, vomiting and diarrhea may occur.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS Number</u>	<u>Concentration</u>
Thorium Nitrate, hydrated	13470-07-0	.008 N
Synonyms:	N/A	

4. FIRST AID MEASURES

If Inhaled: Remove person to fresh air, loosen tight clothing. Obtain medical attention if breathing is difficult.
Skin Contact: Flush all affected areas with large amounts of water for at least 15 minutes.
Eye Contact: Flush eyes with plenty of water for at least 15 minutes and consult a physician. Remove contact lenses if able to do so.
If Ingested: Do NOT induce vomiting unless instructed to do so by a physician. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Flammability Overview: Under extreme heat during INTESE fire may explode. Under this intense condition, may act as an initiation source for vapor combustion.
Flash Point: Not Applicable
Extinguishing Media: Use water-spray, foam, dry chemical, or carbon dioxide.
Special Protective Equipment for Firefighters: Wear a self-contained breathing apparatus (SCBA) for firefighting if necessary.
Hazardous Combustion Products: Oxides of Nitrogen.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protective equipment. Avoid breathing vapors, mist, or gas. Always ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental Precautions: Prevent further leakage or spillage if safe to do so. Prevent from entering drains and waterways. Discharge into the environment must be avoided.
Containment and Clean Up: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. If assistance is needed call CHEMTEL or emergency services.

7. HANDLING AND STORAGE



Safe Handling: Use personal protective equipment. Avoid breathing vapors, mist, or gas. Always ensure adequate ventilation.

Safe Storage: Keep containers tightly closed in a dry well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store away from incompatible materials. Keep out of direct sunlight and heat.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Component	CAS Number	Exposure Limit	Basis
Thorium Nitrate, hydrated	13470-07-0	Not Established	ACGIH Threshold Value (TWA) (mg/m ³)
		Not Established	OSHA PEL (TWA) (mg/m ³)

Personal Protective Equipment

Eye Protection: Wear tightly fitting safety goggles or safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH. Have eye-wash stations available where eye contact can occur.

Hand Protection: Handle with chemical-resistant gloves. Gloves must be inspected prior to use. Dispose of contaminated gloves. Wash and dry hands after use.

Skin Protection: Protect skin by wearing pants, close toe shoes and long sleeves. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Safety showers should be located in the work area where skin contact can occur.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate, use a NIOSH-approved full-face respirator with appropriate cartridges. For oxygen deficient atmospheres, use a NIOSH approved air-supplied respirator. Respiratory protection may be needed for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA 29 CFR 1910.134.

General Controls: Always ensure adequate ventilation and that working areas contain safety showers and eye wash stations. Handle material in accordance with good industrial hygiene and safety practices.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
 Color: Colorless
 Odor: Odorless
 Odor Threshold: Not Applicable
 pH: 2.5-3.0
 Melting/Freezing Point: Not Established
 Boiling Point: 212 ° F
 Flash Point: Not Established
 Evaporation Rate: 1.0
 Flammability (solid, gas): Not Established
 Flammability/Explosion Limits: Not Established
 Vapor Pressure @ 20°C: Not Established



Vapor Density: Not Established
 Specific Gravity: 1.0
 Density: Not Established
 Solubility in Water: Infinite
 Partition Coefficient: Not Established
 Autoignition Temperature: Not Established
 Decomposition Temperature: Not Established
 Viscosity: Not Established

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under recommended use and storage conditions.
 Conditions and Materials to Avoid: Extreme heat.
 Hazardous Decomposition Products: Oxides of Nitrogen.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	CAS Number	Test	Toxicity
Thorium Nitrate, hydrated	13470-07-0	Oral LD50 (Mouse)	Not Established
		Skin	Not Established
		Inhalation LC50-1H (Rat)	Not Established

Potential Health Effects

Inhalation: May cause irritation.
 Skin: Mildly irritating may produce reddening on moist skin.
 Eyes: May cause eye irritation.
 Ingestion: Absorption through gastrointestinal tract is notably slight. With large ingestion, abdominal pain, dizziness, vomiting and diarrhea may occur.
 Signs and Symptoms of Exposure: Not Established
 Chronic Effects of Long-term Exposure: Any person with pre-disposition to sensitivity may be more susceptible to substance effects.
 Carcinogenicity: No component of this product at levels greater than 0.1% is identified as carcinogenic by IARC, ACGIH, or OSHA.

12. ECOLOGICAL INFORMATION

Acute Ecotoxicity

Component	CAS Number	Organism	Ecotoxicity
Thorium Nitrate, hydrated	13470-07-0	Not Established	Not Established



Ecological Effects

Persistence and Degradability: Not Established
Bioaccumulation Potential: Not Established
Mobility in Soil: Not Established
Other Adverse Effects: Not Established

13. DISPOSAL CONSIDERATIONS

Disposal: Surplus and non-recyclable material should be treated as hazardous waste and be disposed of by a licensed disposal company. Material should be disposed in accordance with all local, state, and federal regulations. Regulations vary by region. Do not release into sewers or waterways.

Contaminated Packaging: Disposal must comply with CFR Title 10, part 40/ Dispose of all waste according to Federal, State and Local regulations.

14. TRANSPORT INFORMATION

DOT Information

Proper Shipping Name: Non- Regulated
UN Number:
Hazard Class:
Packing Group:

Reportable Quantity (RQ):

Marine Pollutant: Not Established

Note: Under the Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user to determine whether a substance should be classified as a hazardous waste at the time of disposal. This is due to the fact that product use, transformation, synthesis, mixtures, etc. may change the nature of the product.

15. REGULATORY INFORMATION

US Federal

SARA 302 Components: This product does not contain a Section 302 substance subject to Emergency Planning Notification/Threshold Planning Quantities
SARA 311/312 Hazards: Not Established
SARA 313 Components: This product does not contain a Section 313 listed toxic chemical subject to release reporting requirements.

TSCA Inventory: All chemical components are listed on TSCA inventory.

European Union



EC Inventory:	Not Established
State Regulations	This product does not contain chemicals currently on the California list of known carcinogens and/or reproductive toxins.
CA Prop 65:	This product does not contain chemicals currently on the California list known carcinogens and/or reproductive toxins.

16. OTHER INFORMATION

SDS Version:	1.0
Revision Date:	06/01/2015
Disclaimer:	The information contained in this document was carefully compiled and is believed to be accurate. The information represents the present state of our knowledge and is applicable to the product with the regard to appropriate safety precautions. However, it does not represent any guarantee of the properties of the product. Advanced Chemical Technology, Inc. shall not be held liable for any damages resulting from handling or from contact with the above product. It is the responsibility of the purchaser to determine the suitability of the product for their particular purposes. Nothing contained herein shall be construed to be a recommendation to use, or as a license to operate under, or to infringe any existing patents. For product information call Advanced Chemical Technology, Inc., 1-909-980-4556.