



LTS Research Laboratories, Inc.  
Safety Data Sheet  
Scandium nitrate hydrate

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1. Product and Company Identification

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Trade Name:	Scandium nitrate hydrate
Chemical Formula:	$\text{Sc}(\text{NO}_3)_3 \cdot x\text{H}_2\text{O}$
Recommended Use:	Scientific research and development
Manufacturer/Supplier:	LTS Research Laboratories, Inc.
Street:	37 Ramland Road
City:	Orangeburg
State:	New York
Zip Code:	10962
Country:	USA
Tel #:	855-587-2436 / 855-lts-chem
24-Hour Emergency Contact:	800-424-9300 (US & Canada) +1-703-527-3887 (International)



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## 2. Hazards Identification

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Signal Word:

Danger



Hazard Statements:

H272: May intensify fire; oxidizer  
H315: Causes skin irritation  
H319: Causes serious eye irritation  
H335: May cause respiratory irritation

Precautionary Statements:

P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking  
P220 Keep/Store away from clothing/ combustible materials.  
P221 Take any precaution to avoid mixing with combustibles.  
P261: Avoid breathing dust/fume/gas/mist/vapors/spray  
P264: Wash face, hands and any exposed skin thoroughly after handling  
P271: Use only outdoors or in a well-ventilated area  
P280: Wear protective gloves/protective clothing/eye protection/face protection  
P302+P352: IF ON SKIN: Wash with soap and water  
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing  
P312: Call a POISON CENTER or doctor/physician if you feel unwell  
P332+P313: If skin irritation occurs: Get medical advice/attention  
P337+P313: If eye irritation persists get medical advice/attention  
P362: Take off contaminated clothing and wash before reuse  
P370+P378: In case of fire: Use CO<sub>2</sub>, dry sand, dry chemical or alcohol-resistant foam for extinction.  
P403+P233: Store in a well-ventilated place. Keep container tightly closed  
P405: Store locked up  
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

Health:	2
Flammability:	0
Physical:	2

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## 3. Composition

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Chemical Family:

Ceramic

Additional Names:

Scandium (III) nitrate hydrate, scandium trinitrate hydrate

Scandium nitrate hydrate (Sc(NO<sub>3</sub>)<sub>3</sub>\*xH<sub>2</sub>O):

Percentage:	100 wt%
CAS #:	107552-14-7
EC #:	236-701-5

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#### 4. First Aid Procedures

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General Treatment:	Seek medical attention if symptoms persist.
Special Treatment:	None
Important Symptoms:	None
Inhalation:	Remove victim to fresh air. Supply oxygen if breathing is difficult. Keep patient warm. Seek immediate medical attention.
Ingestion:	Seek immediate medical attention.
Skin:	Immediately wash affected area with mild soap and water. Remove any contaminated clothing. Seek immediate medical attention.
Eyes:	Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek immediate medical attention

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#### 5. Firefighting Measures

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Flammability:	Non-flammable
Extinguishing Media:	Do not use water for fires – use CO <sub>2</sub> , sand, extinguishing powder.
Spec. Fire Fighting Procedure:	Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

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#### 6. Accidental Release Measures

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If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Keep unprotected persons away. Isolate spill area and provide ventilation. Soak up with inert absorbent material. Vacuum up spill using an electrically protected high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust. Do not flush into surface water or sanitary sewer system
Environmental Precautions:	Isolate runoff to prevent environmental pollution.

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#### 7. Handling and Storage

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Handling Conditions:	Wash thoroughly after handling. Avoid breathing vapors, mist or gas. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. Store under dry inert gas. Store away from clothing and other combustible materials, water/moisture, strong acids, strong reducing agents. This product is hygroscopic. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:	Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.

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## 8. Exposure Controls and Personal Protection

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Permissible Exposure Limits:	N/A
Threshold Limit Value:	N/A
Special Equipment:	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
Respiratory Protection:	Dust Respirator
Protective Gloves:	Rubber gloves
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

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## 9. Physical and Chemical Characteristics

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Color	Off-white
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	N/A
Water Solubility:	Soluble
Boiling Point:	N/A
Melting Point:	N/A
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	N/A
Molecular weight:	230.97 g/mol (anhydrous)

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## 10. Reactivity

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Stability:	Stable under recommended storage conditions. Contact with combustible/organic material may cause fire
Reacts With:	Strong reducing agents, combustibles (wood paper, oil, clothing, etc.), water/moisture, strong acids
Incompatible Conditions:	Water/moisture, heat, ignition sources
Hazardous Decomposition Products:	Metal oxide fume, nitrogen oxides (NO <sub>x</sub> ), scandium oxide

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## 11. Toxicological Information

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Potential Health Effects:	
Eyes:	Causes serious eye irritation
Skin:	Causes skin irritation
Ingestion:	May cause irritation
Inhalation:	May cause respiratory irritation
Chronic:	N/A
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	N/A
Carcinogen:	IARC: 2A - Group 2A: Probably carcinogenic to humans (Scandium trinitrate) ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

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#### 12. Ecological Information

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Aquatic Toxicity:	N/A
Persistent Bioaccumulation Toxicity:	May persist
Very Persistent, Very Bioaccumulative:	N/A
Notes:	May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

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#### 13. Disposal Considerations

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Dispose of in accordance with local, state, national, and international regulations.

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#### 14. Transportation Data

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Hazardous:	Hazardous for transportation
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Hazard Class:	5.1 Oxidizers
Packing Group:	II
UN Number:	UN1477
Proper Shipping Name:	Nitrates, inorganic, n.o.s (Scandium nitrate hydrate)

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#### 15. Regulatory Information

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Sec 302 Extremely Hazardous:	No
Sec 304 Reportable Quantities:	N/A
Sec 313 Toxic Chemicals:	No

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#### 16. Other Information

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This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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