



LTS Research Laboratories, Inc.
Safety Data Sheet
Aluminum Nitrate Nonahydrate

1. Product and Company Identification

Trade Name: Aluminum Nitrate Nonahydrate
Chemical Formula: $\text{Al}(\text{NO}_3)_3 \cdot 9\text{H}_2\text{O}$
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)

2. Hazards Identification

Signal Word:

Danger



Hazard Statements:

H272: May intensify fire; oxidizer
H302: Harmful if swallowed
H312: Harmful in contact with skin
H315: Causes skin irritation
H319: Causes serious eye irritation
H332: Harmful if inhaled
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
P280: Wear protective gloves/protective clothing/eye protection/face protection
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P302+P352: IF ON SKIN: Wash with plenty of 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
P332+P313: If skin irritation occurs: Get medical advice/ attention

HMIS Health Ratings (0-4):

Health:	2
Flammability:	0
Physical:	0

3. Composition

Chemical Family:	Inorganic material
Additional Names:	Aluminum nitrate nonahydrate, Nitric acid, Aluminum salt, Aluminum trinitrate nonahydrate

Aluminum Nitrate Nonahydrate ($\text{Al}(\text{NO}_3)_3 \cdot 9\text{H}_2\text{O}$):

Percentage:	100 wt%
CAS #:	7784-27-2
EC #:	236-751-8

4. First Aid Procedures

General Treatment:	Seek medical attention if symptoms persist.
Special Treatment:	None
Important Symptoms:	None

Inhalation:	Remove the victim to fresh air. Supply oxygen if breathing is difficult.
Ingestion:	Give one to two glasses of water. Never induce vomiting or give anything by mouth to an unconscious person.
Skin:	Wash affected area with mild soap and water. Remove any contaminated clothing.
Eyes:	Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing

5. Firefighting Measures

Flammability:	Non-flammable, except as powder
Extinguishing Media:	Water spray, CO_2 , Dry chemical, Alcohol-resistant foam
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.

6. Accidental Release Measures

If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up the spill using a high-efficiency particulate absolute (HEPA) air filter and place it in a closed container for disposal. Take care not to raise dust.
Environmental Precautions:	Isolate runoff to prevent environmental pollution.

7. Handling and Storage

Handling Conditions:	Wash thoroughly after handling.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:	Do not use tobacco or food in the 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 the threshold limit.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits:	2 mg/m ³ as Al(NO ₃) ₃ ·9H ₂ O, long-term value
Threshold Limit Value:	N/A
Special Equipment:	None
Respiratory Protection:	Dust Respirator
Protective Gloves:	Nitrile rubber gloves
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color	White
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	419 g/l (20 °C)
Boiling Point:	150°C
Melting Point:	73 °C
Flash Point:	35°C
Autoignition Temperature:	N/A
Density:	1.72 g/cm ³
Molecular weight:	375.13 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Strong reducing agents, Strong oxidizing agents, Bases, Combustible material, Powdered metals, Acids, Cyanides, Heavy metals
Incompatible Conditions:	Excess heat, Contact with combustible/organic material, Dust formation, Exposure to moist air or water.
Hazardous Decomposition Products:	Nitrogen oxides, Aluminum oxide

11. Toxicological Information

Potential Health Effects:	
Eyes:	Causes serious eye damage
Skin:	May cause irritation
Ingestion:	May cause irritation
Inhalation:	May cause irritation
Chronic:	N/A
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	LD50 rat (oral toxicity): 3671 mg/kg
Carcinogen:	N/A

12. Ecological Information

Aquatic Toxicity:	N/A
Persistent Bioaccumulation Toxicity:	N/A
Very Persistent, Very Bioaccumulative:	N/A
Notes:	N/A

13. Disposal Considerations

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

14. Transportation Data

Hazardous: Hazardous for transportation



Hazard Class: 5.1
Packing Group: III
UN Number: UN1438
Proper Shipping Name: Nitrates, Inorganic, N.O.S.

15. Regulatory Information

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

16. Other Information

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 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 to handle the product. The aim of the mandatory regulations mentioned is to help the user fulfill his obligations regarding the use of hazardous products.

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