

Aluminum Nitrate 9H2O**SECTION 1. IDENTIFICATION**

Product Identifier	Aluminum Nitrate 9H2O
Other Means of Identification	Aluminum trinitrate nonahydrate
Product Code(s)	AL3610
Product Family	Inorganic Solid
Recommended Use	Laboratory and industrial use.
Restrictions on Use	None known.
Supplier Identifier	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
Emergency Phone No.	CANUTEC CANADA, 613-996-6666, 24 Hours
SDS No.	1269

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

Oxidizing solid - Category 3; Skin irritation - Category 2; Eye irritation - Category 2

Label Elements**Signal Word:**

Warning

May intensify fire; oxidizer.

Causes skin irritation.

Causes serious eye irritation.

Precautionary Statement(s):**Prevention:**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep or store away from clothing and other combustible materials.

Wash hands and skin thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

Response:

IF ON SKIN: Wash with plenty of water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice or attention.

Product Identifier: Aluminum Nitrate 9H2O - Ver. 1

Date of Preparation: January 16, 2018

Date of Last Revision: January 17, 2018

Page 01 of 06

Disposal:
Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Aluminum nitrate nonahydrate	7784-27-2	> 98	Aluminum trinitrate nonahydrate	

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. If experiencing respiratory symptoms (e.g. coughing, shortness of breath, wheezing), call a Poison Centre or doctor.

Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. If skin irritation occurs, get medical advice or attention.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

Ingestion

Call a Poison Centre or doctor if you feel unwell.

First-aid Comments

Consult a doctor and/or the nearest Poison Control Centre for all exposures except minor instances of inhalation or skin contact.

All first aid procedures should be periodically reviewed by a doctor familiar with the material or its conditions of use in the workplace.

Most Important Symptoms and Effects, Acute and Delayed

None known.

Immediate Medical Attention and Special Treatment

Special Instructions

General advice, consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Does not burn. Oxidizer. May intensify fire. Closed containers may rupture violently when heated releasing contents. In a fire, the following hazardous materials may be generated: corrosive, oxidizing nitrogen oxides; nitric acid.

Special Protective Equipment and Precautions for Fire-fighters

Product Identifier: Aluminum Nitrate 9H2O - Ver. 1

Date of Preparation: January 16, 2018

Date of Last Revision: January 17, 2018

Evacuate area. Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or gases. Move containers from fire area if it can be done without risk. Otherwise, use water in flooding quantities as a spray or fog to keep fire-exposed containers cool and absorb heat. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles.

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Remove or isolate incompatible materials as well as other hazardous materials. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Notify government occupational health and safety and environmental authorities.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Stop or reduce leak if safe to do so. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Flush spill area.

Small spills or leaks: contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal. Flush spill area.

Large spills or leaks: contact emergency services and manufacturer/supplier for advice.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Only use where there is adequate ventilation. Avoid generating dusts. Keep smallest practical amount in work area. Eliminate heat and ignition sources such as sparks, open flames, hot surfaces and static discharge. Post "No Smoking" signs. Prevent accidental contact with incompatible chemicals. Prevent accidental contact with flammable and combustible materials. Never return unused or contaminated product to its original container. Keep containers tightly closed when not in use or empty.

Conditions for Safe Storage

Store in an area that is: cool, out of direct sunlight and away from heat and ignition sources, separate from incompatible materials (see Section 10: Stability and Reactivity), clear of combustible and flammable materials (e.g. old rags, cardboard). Store in the original, labelled, shipping container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Aluminum nitrate nonahydrate	Not established		Not established			

Aluminum nitrate nonahydrate:

TLV Comments:

*TLV-TWA for soluble salts of aluminum has been withdrawn.

NOTE: In many jurisdictions, exposure limits are similar to the ACGIH TLVs. Since a TLV has not been established for this substance, appropriate government agencies in each jurisdiction should be consulted to determine which regulations apply.

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Provide eyewash and safety shower if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

Product Identifier: Aluminum Nitrate 9H20 - Ver. 1

Date of Preparation: January 16, 2018

Date of Last Revision: January 17, 2018

Page 03 of 06

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	White crystals.
Odour	Odourless
Odour Threshold	Not available
pH	2.0 - 4.0 (5% solution)
Melting Point/Freezing Point	73.5 °C (164.3 °F) (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	Not applicable
Evaporation Rate	Not available
Flammability (solid, gas)	Will not burn.
Upper/Lower Flammability or Explosive Limit	Not applicable (upper); Not applicable (lower)
Vapour Pressure	~ 0 kPa (0 mm Hg)
Vapour Density (air = 1)	Not applicable
Relative Density (water = 1)	Not available
Solubility	Very soluble in water; Highly soluble in alcohols (e.g. ethanol).
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not applicable
Decomposition Temperature	135 °C (275 °F)
Viscosity	Not available (kinematic); Not available (dynamic)
Other Information	
Physical State	Solid
Molecular Weight	375.13

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Oxidizer. May cause or intensify fire.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to Avoid

Generation of dust. Water, moisture or humidity. Incompatible materials. Excess heat. Contact with combustible materials.

Incompatible Materials

Product Identifier: Aluminum Nitrate 9H2O - Ver. 1

Date of Preparation: January 16, 2018

Date of Last Revision: January 17, 2018

Page 04 of 06

Strong acids (e.g. hydrochloric acid), strong reducing agents (e.g. hydrides). Combustible materials. Cyanides.

Hazardous Decomposition Products

Corrosive, oxidizing nitrogen oxides; nitric acid.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Aluminum nitrate nonahydrate	Not available	3632 mg/kg (rat)	Not available

Skin Corrosion/Irritation

Animal tests show moderate or severe irritation.

Serious Eye Damage/Irritation

Animal tests show serious eye irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May cause nose and throat irritation.

Ingestion

If large amounts are swallowed may cause irritation of the mouth, throat and stomach.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Aluminum nitrate nonahydrate	Not Listed	Not designated	Not Listed	Not Listed

:

Reproductive Toxicity

Development of Offspring

No information was located.

Sexual Function and Fertility

No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

Product Identifier: Aluminum Nitrate 9H2O - Ver. 1

Date of Preparation: January 16, 2018

Date of Last Revision: January 17, 2018

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Bury in a licensed landfill or burn in an approved incinerator according to federal, provincial/state, and local regulations.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	UN1438	Aluminum Nitrate	5.1	III
US DOT	UN1438	Aluminum Nitrate	5.1	III

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Not listed on the DSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

Not listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

SDS Prepared By Alphachem Limited

Phone No. (905)-821-2995

Date of Preparation January 16, 2018

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References CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

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