

Infosafe No™ 1CHON      Issue Date : January 2021      RE-ISSUED by CHEMSUPP

Product Name **ALUMINIUM NITRATE Nonahydrate**

Classified as hazardous

## 1. Identification

**GHS Product Identifier** ALUMINIUM NITRATE Nonahydrate

**Company Name** CHEMSUPPLY AUSTRALIA PTY LTD (ABN 19 008 264 211)

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SA 5013 Australia

**Telephone/Fax Number** Tel: (08) 8440-2000

**Emergency phone number** CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

**E-mail Address** www.chemsupply.com.au

**Recommended use of the chemical and restrictions on use** Textiles (mordant), leather tanning, manufacture of incandescent filaments, catalyst in petroleum refining, nucleonics, antiperspirant, nitrating agent, anticorrosion agent, uranium extraction and laboratory reagent.

<b>Other Names</b>	<u>Name</u>	<u>Product Code</u>
	ALUMINIUM NITRATE Nonahydrate AR	AA056
	Aluminum trinitrate	

### Other Information

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

## 2. Hazard Identification

**GHS classification of the substance/mixture** Eye Damage/Irritation: Category 1

**Signal Word (s)** DANGER

**Hazard Statement (s)** H318 Causes serious eye damage.

**Pictogram (s)** Corrosion



**Precautionary statement – Prevention** P280 Wear eye protection/face protection.

**Precautionary statement – Response** P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER or doctor/physician.

**Precautionary statement – Disposal** P501 Dispose of contents/container to an approved waste disposal plant.

## 3. Composition/information on ingredients

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Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Aluminium nitrate nonahydrate	7784-27-2	100 %

#### 4. First-aid measures

<b>Inhalation</b>	If inhaled, remove from contaminated area to fresh air immediately, avoid becoming a casualty. Make patient comfortable, keep warm and at rest until fully recovered. If symptoms persist, obtain medical attention.
<b>Ingestion</b>	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.
<b>Skin</b>	Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. If rapid recovery does not occur, obtain medical attention
<b>Eye contact</b>	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Obtain medical attention immediately.
<b>First Aid Facilities</b>	Maintain eyewash fountain and safety shower in work area.
<b>Advice to Doctor</b>	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
<b>Other Information</b>	For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

#### 5. Fire-fighting measures

<b>Hazards from Combustion Products</b>	May liberate toxic fumes in fire such as nitrogen oxides.
<b>Specific Methods</b>	Small fire: USE FLOODING QUANTITIES OF WATER. Do not use dry chemicals, CO2 or foam. If safe to do so, move undamaged containers from fire area. Do not move cargo if cargo has been exposed to heat. Large fire: Flood fire area with water from a protected position. Cool containers with flooding quantities of water until well after fire is out - If impossible, withdraw from area and let fire burn. Avoid getting water inside containers: a violent reaction may occur. Dam fire control water for later disposal.
<b>Specific hazards arising from the chemical</b>	Will accelerate burning when involved in a fire. May explode from heating, shock, friction or contamination. Can react explosively with hydrocarbons (fuels). May ignite combustibles (wood, paper, clothing, etc). Fire may produce irritating, poisonous, and/or corrosive gases. Containers may explode when heated. Runoff may create fire or explosion hazard.
<b>Hazchem Code</b>	1Z
<b>Decomposition Temp.</b>	135 °C
<b>Precautions in connection with Fire</b>	Wear SCBA and chemical splash suit. Structural firefighter's uniform will provide limited protection. Full fire kit and breathing apparatus.

#### 6. Accidental release measures

<b>Spills &amp; Disposal</b>	Do not contaminate. Keep combustibles (wood, paper, clothing, oil, etc.) away from spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use water spray to knock down vapours or divert vapour clouds. Prevent entry into waterways, drains or confined areas. Prevent exposure to heat. <b>Dry Spill</b> Use clean non-sparking tools to transfer material to a clean, dry plastic container and cover loosely. Move container from spill area. <b>Small Liquid Spill</b> Use a non-combustible material like vermiculite, sand or earth to soak up the product and place in a loosely-covered container for later disposal. <b>Large Liquid Spill</b> SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.
<b>Personal Precautions</b>	Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.

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<b>Personal Protection</b>	Wear protective clothing specified for normal operations (see Section 8)
<b>Clean-up Methods - Small Spillages</b>	Sweep up (avoid generating dust) and using clean non-sparking tools transfer to a clean, suitable, clearly labelled container for disposal in accordance with local regulations. Do not use rags, sawdust or other combustible absorbents to wipe up spilled material.
<b>Environmental Precautions</b>	May contribute to the eutrophication of water supplies. Hazard for drinking water.

## 7. Handling and storage

<b>Precautions for Safe Handling</b>	Avoid substance contact and the generation and inhalation of dust.
<b>Conditions for safe storage, including any incompatibilities</b>	Store at room temperature (15 - 25 °C). Store away from combustible materials. Keep container tightly closed in a dry, well-ventilated place away from direct sunlight and other sources of heat or ignition. Store away from sources of heat and ignition. Store away from organic and combustible materials. Keep containers closed when not in use.
<b>Corrosiveness</b>	Will corrode some metals if combined with moisture.
<b>Storage Regulations</b>	Refer Australian Standard AS 4326-1995 'The storage and handling of oxidizing agents'. Refer Australian Standard AS/NZS 2243.10:2004 'Safety in laboratories - Storage of chemicals'.
<b>Unsuitable Materials</b>	Some metals.

## 8. Exposure controls/personal protection

<b>Other Exposure Information</b>	These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity. A time weighted average (TWA) has been established for Aluminium, soluble salts (Safe Work Australia) of 2 mg/m <sup>3</sup> . The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week.
<b>Appropriate engineering controls</b>	Maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.
<b>Respiratory Protection</b>	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.
<b>Eye Protection</b>	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.
<b>Hand Protection</b>	Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves - Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments. Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.
<b>Personal Protective Equipment</b>	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.
<b>Footwear</b>	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection,

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<b>Body Protection</b>	care and use. Flame retardant antistatic protective clothing. Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
<b>Hygiene Measures</b>	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

## 9. Physical and chemical properties

<b>Form</b>	Solid
<b>Appearance</b>	Deliquescent white crystals.
<b>Decomposition Temperature</b>	135 °C
<b>Melting Point</b>	73 °C
<b>Solubility in Water</b>	Very soluble.
<b>Solubility in Organic Solvents</b>	Very soluble in alcohol. Very slightly soluble in acetone. Almost insoluble in ethyl acetate and pyridine.
<b>pH</b>	2-4 (50 g/l, H <sub>2</sub> O)
<b>Flammability</b>	Not combustible but assists combustion of other substances.
<b>Molecular Weight</b>	375.13
<b>Oxidising Properties</b>	Oxidiser.

## 10. Stability and reactivity

<b>Chemical Stability</b>	Stable.
<b>Conditions to Avoid</b>	Moisture. High temperatures. Incompatibles.
<b>Incompatible Materials</b>	Combustible material, reducing agents and metals.
<b>Hazardous Decomposition Products</b>	Toxic nitrogen oxides and aluminium oxides.
<b>Possibility of hazardous reactions</b>	May react violently in contact with combustible material, reducing agents, cyanides, esters, metals in powder form, strong acids and isocyanates. Contact with some metals may be explosive.
<b>Hazardous Polymerization</b>	Will not occur.

## 11. Toxicological Information

<b>Toxicology Information</b>	No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. If mishandled or overexposed to this product the following symptoms or effects may occur.
<b>Acute Toxicity - Oral</b>	LD50 Oral - Rat - 3,263 mg/kg (OECD Test Guideline 401)
<b>Ingestion</b>	Ingestion may cause nausea, vomiting and absorption. Symptoms after absorption of toxic quantities may include dizziness, stomach irritation, abdominal cramps, diarrhea, weakness, CNS disorders, methaemoglobinaemia, convulsions and collapse.
<b>Inhalation</b>	May irritate the nose and throat. Symptoms may include sore throat, coughing and shortness of breath.
<b>Skin</b>	May be slightly irritating to skin. May cause redness and pain.
<b>Eye</b>	Causes serious eye damage.
<b>Respiratory sensitisation</b>	Not classified based on available information.
<b>Skin Sensitisation</b>	Not classified based on available information.

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<b>Germ cell mutagenicity</b>	Not classified based on available information.
<b>Carcinogenicity</b>	Not classified based on available information.
<b>Reproductive Toxicity</b>	Not classified based on available information.
<b>STOT-single exposure</b>	Not classified based on available information.
<b>STOT-repeated exposure</b>	Not classified based on available information.
<b>Chronic Effects</b>	Repeated ingestion of small amounts may cause weakness, depression, headache and mental impairment. Ingestion of large amounts may cause phosphate deficiency.
<b>Serious eye damage/irritation</b>	Eye Damage/Irritation: Category 1 H318 Causes serious eye damage.
<b>Mutagenicity</b>	Not classified based on available information.
<b>Other Information</b>	Introduction of aluminium compounds directly into the blood stream may contribute to the development of neurological effects resembling senility.

## 12. Ecological information

<b>Ecotoxicity</b>	Quantitative data on the ecological effect of this product are not available.
<b>Persistence and degradability</b>	Methods for the determination of biodegradability are not applicable to inorganic substances.
<b>Mobility</b>	Due to its solubility will be highly mobile in soils.
<b>Information on Ecological Effects</b>	The following applies to aluminium compounds in general: for acidic aluminium compounds: biological effects: toxic for water organisms. In the case of alkaline aluminium compounds, flocculation may cause mechanical damage in aquatic organisms. The following applies to nitrates in general: may contribute to the eutrophication of water supplies. Hazard for drinking water.
<b>Environmental Protection</b>	Do not allow to enter waters, waste water, or soil!

## 13. Disposal considerations

<b>Disposal Considerations</b>	Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.
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## 14. Transport information

<b>Transport Information</b>	Dangerous goods of Class 5.1 (Oxidizing Agent) are incompatible in a placard load with any of the following: Class 1, Class 2.1, Class 2.3, Class 3, Class 4, Class 5.2, Class 7, Class 8, Fire risk substances and Combustible liquids.
<b>U.N. Number</b>	1438
<b>UN proper shipping name</b>	ALUMINIUM NITRATE
<b>Transport hazard class(es)</b>	5.1
<b>Hazchem Code</b>	1Z
<b>Packing Group</b>	III
<b>EPG Number</b>	5A1
<b>IERG Number</b>	31

## 15. Regulatory information

<b>Regulatory Information</b>	All the constituents of this product are listed on the Australian Inventory of Chemical Substances ( AICS ), or exempted. Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and
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restricted hazardous chemicals.

**Poisons Schedule**      Not Scheduled

## 16. Other Information

**Literature References**      'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia.  
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'  
Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals'.  
Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand.  
Safe Work Australia, 'Hazardous Chemical Information System'.  
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances'.  
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment'.

**Contact Person/Point**      Paul McCarthy Ph. (08) 8440 2000      **DISCLAIMER STATEMENT:**  
All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. ChemSupply Australia Pty Ltd accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives.

**Empirical Formula & Structural Formula**      Al (NO<sub>3</sub>)<sub>3</sub>•9H<sub>2</sub>O

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