

MATERIAL SAFETY DATA SHEET (SDS/MSDS)

ALUMINIUM NITRATE (NONAHYDRATE) 98.5% AR

CAS-No.: 7784-27-2

Product Code: 00125

Molecular Formula: $\text{Al}(\text{NO}_3)_3 \cdot 9\text{H}_2\text{O}$

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	:	Substance
Trade name	:	Aluminium Nitrate (nonahydrate) 98.5% AR
EC-No.	:	236-751-8
CAS No	:	7784-27-2

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Company : Chemnovo Synthesis Pvt Ltd.
N-226 Near Kumbhavali Naka
Tarapur MIDC, Boisar-401 506
Palghar, Maharashtra
Telephone : +91 7400096089
Email: export@chemnovo.in

1.4. Emergency telephone number

Emergency number : + 91 7400096089 (9:00am – 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Oxidising Solids,	H272
Category 2	
Skin corrosion/irritation,	H315
Category 2	
Serious eye damage/eye	H319
irritation, Category 2	

Full text of H statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

O; R8
Xi; R36
Xi; R38

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS03

GHS07

Signal word (CLP)	:	Danger
Hazard statements (CLP)	:	H272 - May intensify fire; oxidiser H315 - Causes skin irritation H319 - Causes serious eye irritation
Precautionary statements (CLP)	:	P220 - Keep/Store away from clothing, combustible materials P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	:	Aluminium Nitrate (nonahydrate) 98.5% AR
CAS No	:	7784-27-2
EC-No.	:	236-751-8

Full text of R- and H-statements: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	:	Assure fresh air breathing. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact	:	Wash with plenty of soap and water. Wash contaminated clothing before reuse. Get medical advice/attention.
First-aid measures after eye contact	:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	:	Rinse mouth. Do not induce vomiting. Get medical advice/attention.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep in fireproof place. Store in a well-ventilated place. Keep cool.

Incompatible materials : Heat sources. combustible materials.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Personal protective equipment : Wear fire/ flame resistant/retardant clothing.

Hand protection : Protective gloves

Eye protection : Chemical goggles or safety glasses

Skin and body protection : Wear suitable protective clothing

Respiratory protection : [In case of inadequate ventilation] wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Molecular mass : 375.13 g/mol

Colour : White crystals.

Odour : No data available

Odour threshold : No data available

pH : 2.5 – 3.5

Relative evaporation rate (butylacetate=1) : No data available

Melting point : 73 °C

Freezing point : No data available

Boiling point : 135 °C

Flash point : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapour pressure : No data available

Relative vapour density at 20 °C : No data available

Relative density : No data available

Solubility : Water: Soluble in water

Log Pow : No data available

Viscosity, kinematic : No data available

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after skin contact : Causes skin irritation.
Symptoms/effects after eye contact : Causes serious eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide. Dry powder. Foam. Water spray.
Unsuitable extinguishing media : Do not use extinguishing media containing water.

5.2. Special hazards arising from the substance or mixture

Fire hazard : May intensify fire; oxidiser
Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

5.3. Advice for firefighter

Firefighting instructions : In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : No naked lights. No smoking.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. On land, sweep or shovel into suitable containers.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Hazardous waste due to potential risk of explosion.
Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe vapours. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge.

Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	The substance or mixture is classified as oxidizing with the subcategory 3. May cause fire or explosion; strong oxidiser.
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

May intensify fire; oxidiser.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Heat. Sparks. Open flame.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:	Not classified
Skin corrosion/irritation	:	Causes skin irritation.
pH	:	2.5 – 3.5
Serious eye damage/irritation	:	Causes serious eye irritation.
pH	:	2.5 – 3.5
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
Specific target organ toxicity (single exposure)	:	Not classified
Specific target organ toxicity (repeated exposure)	:	Not classified
Aspiration hazard	:	Not classified

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Additional information : Hazardous waste due to potential risk of explosion.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / AND

14.1. UN number

UN-No. (ADR)	:	1438
UN-No. (IMDG)	:	1438
UN-No. (IATA)	:	1438
UN-No. (AND)	:	1438
UN-No. (RID)	:	1438

14.2. UN proper shipping name

Proper Shipping Name (ADR)	:	ALUMINIUM NITRATE
Proper Shipping Name (IMDG)	:	ALUMINIUM NITRATE
Proper Shipping Name (IATA)	:	ALUMINIUM NITRATE
Proper Shipping Name (ADN)	:	ALUMINIUM NITRATE
Proper Shipping Name (RID)	:	ALUMINIUM NITRATE
Transport document description (ADR):		UN 1438 ALUMINIUM NITRATE, 5.1, III, (E)
Transport document description (IMDG)		UN 1438 ALUMINIUM NITRATE, 5.1, III
Transport document description (IATA)		UN 1438 ALUMINIUM NITRATE, 5.1, III
Transport document description (ADN)		UN 1438 ALUMINIUM NITRATE, 5.1, III
Transport document description (RID)		UN 1438 ALUMINIUM NITRATE, 5.1, III

14.3. Transport hazard class(es)

ADR

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Transport hazard class(es) (ADR) : 5.1
Danger labels (ADR) : 5.1
:



IMDG
Transport hazard class(es) (IMDG) : 5.1
Danger labels (IMDG) : 5.1
:



IATA
Transport hazard class(es) (IATA) : 5.1
Hazard labels (IATA) : 5.1
:



AND
Transport hazard class(es) (ADN) : 5.1
Danger labels (ADN) : 5.1
:



RID

Transport hazard class(es) (RID) : 5.1
 Danger labels (RID) : 5.1
 :



14.4. Packing group

Packing group (ADR) : III
 Packing group (IMDG) : III
 Packing group (IATA) : III
 Packing group (ADN) : III
 Packing group (RID) : III

14.5. Environmental hazards

Dangerous for the environment : No
 Marine pollutant : No
 Other information : No supplementary information available

14.6. Special precautions for user

– Overland transport

Classification code (ADR) : O2
 Limited quantities (ADR) : 5kg
 Excepted quantities (ADR) : E1
 Packing instructions (ADR) : P002, IBC08, LP02, R001
 Special packing provisions (ADR) : B3
 Mixed packing provisions (ADR) : Mp10
 Portable tank and bulk container instructions (ADR) : T1, BK1, Bk2
 Portable tank and bulk container special provisions (ADR) : Tp33
 Tank code (ADR) : SGAV
 Tank special provisions (ADR) : Tu3
 Vehicle for tank carriage : AT
 Transport category (ADR) : 3
 Special provisions for carriage – Bulk (ADR) : VC1, VC2, AP6, Ap7
 Special provisions for carriage – Loading, unloading and handling (ADR) : Cv24
 Hazard identification number : 50

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(Kemler No.)

Orange plates

:	50
:	1438

Tunnel restriction code (ADR)	:	E
EAC code	:	1Z
- Transport by sea		
Limited quantities (IMDG)	:	5 kg
Excepted quantities (IMDG)	:	E1
Packing instructions (IMDG)	:	P002, Lp02
IBC packing instructions (IMDG)	:	IBC08
IBC special provisions (IMDG)	:	B3
Tank instructions (IMDG)	:	T1, Bk2
Tank special provisions (IMDG)	:	Tp33
EmS-No. (Fire)	:	F-A
EmS-No. (Spillage)	:	S-Q
Stowage category (IMDG)	:	A
MFAG-No	:	140
- Air transport		
PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y546
PCA limited quantity max net quantity (IATA)	:	10kg
PCA packing instructions (IATA)	:	559
PCA max net quantity (IATA)	:	25kg
CAO packing instructions (IATA)	:	563
CAO max net quantity (IATA)	:	100kg
ERG code (IATA)	:	5L
- Inland waterway transport		
Classification code (ADN)	:	O2
Limited quantities (ADN)	:	5 kg
Excepted quantities (ADN)	:	E1
Carriage permitted (AND)	:	B
Equipment required (ADN)	:	PP
Provisions prior to loading (ADN)	:	Lo04
Provisions for carriage in bulk (ADN)	:	Co02
Number of blue cones/lights (ADN)	:	0
Additional requirements/Remarks (ADN)	:	CO02 and LO04 apply only when this substance is carried in bulk or without packaging
- Rail transport		
Classification code (RID)	:	O2

Limited quantities (RID)	:	5kg
Excepted quantities (RID)	:	E1
Packing instructions (RID)	:	P002, IBC08, LP02, R001
Special packing provisions (RID)	:	B3
Mixed packing provisions (RID)	:	Mp10
Portable tank and bulk container instructions (RID)	:	T1, BK1, Bk2
Portable tank and bulk container special provisions (RID)	:	Tp33
Tank codes for RID tanks (RID)	:	SGAV
Special provisions for RID tanks (RID)	:	Tu3
Transport category (RID)	:	3
Special provisions for carriage – Bulk (RID)	:	VC1, VC2, AP6, Ap7
Special provisions for carriage – Loading and unloading (RID)	:	Cw24
Colis express (express parcels) (RID)	:	Ce11
Hazard identification number (RID)	:	50

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Aluminium Nitrate (nonahydrate) 98.5% AR is not on the REACH Candidate List

Aluminium Nitrate (nonahydrate) 98.5% AR is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

12th Ordinance Implementing the Federal

Immission Control Act – 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-statements:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Ox. Sol. 2	Oxidising Solids, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H272	May intensify fire; oxidiser
H315	Causes skin irritation
H319	Causes serious eye irritation
R36	Irritating to eyes
R38	Irritating to skin
R8	Contact with combustible material may cause fire
O	Oxidising
Xi	Irritant

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Chemnovo Synthesis Pvt Ltd. and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.chemnovo.in for additional terms and conditions of sale.

Version: 2.0
Revision Date: 22 December 2025