

### MATERIAL SAFETY DATA SHEET (MSDS)

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

##### 1.1. Product identifier

Product form : Substance  
:  
CAS-No. : 7784-27-2  
Product code : 00928  
Chemical structure :  $\text{Al}(\text{NO}_3)_3 \cdot 9\text{H}_2\text{O}$

##### 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

CHEMIECALL  
Jl. Diklat Pemda, Dukuh Pinang No. 24 RT.001/003  
Kel. Bojong Nangka Kec. Kelapa Dua Tangerang 15821  
Contact: +62(21) 54210228  
[info@chemiecall.com](mailto:info@chemiecall.com) [www.chemiecall.com](http://www.chemiecall.com)

#### 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 irritation, H319  
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

# ALUMINIUM NITRATE NONAHYDRATE AR/ACS

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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] Extra labelling to display Extra classification(s) to display

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. Substances

Name : ALUMINIUM NITRATE NONAHYDRATE AR/ACS

CAS-No. : 7784-27-2

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

### 3.2. Mixtures

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 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.

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### 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 firefighters

Firefighting instructions	: In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
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## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	: No open flames. No smoking.
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#### 6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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#### 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.
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### 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. Take precautionary measures against static discharge. Keep away from sources of ignition - No smoking.
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.

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### 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/flare 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

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Viscosity, kinematic	: No data available
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
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

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### 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 / ADN

#### 14.1. UN number

UN-No. (ADR) : 1438

UN-No. (IMDG) : 1438

UN-No. (IATA) : 1438

UN-No. (ADN) : 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

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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

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



#### ADN

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

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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 (Kemler No.) : 50  
Orange plates :   
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  
Properties and observations (IMDG) : Colourless or white crystals. Deliquescent. Soluble in water. Slightly corrosive. Mixtures with combustible material are readily ignited and may burn fiercely. Harmful if swallowed.  
MFAG-No : 140

#### - Air transport

PCA Excepted quantities (IATA) : E1  
PCA Limited quantities (IATA) : Y546



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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
Special provisions (IATA)	: A803
ERG code (IATA)	: 5L

### - Inland waterway transport

Classification code (ADN)	: O2
Limited quantities (ADN)	: 5 kg
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: 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
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, unloading and handling (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 AR/ACS is not on the REACH Candidate List

ALUMINIUM NITRATE NONAHYDRATE AR/ACS is not on the REACH Annex XIV List

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### 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)

#### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

### 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

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*