

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Aluminium nitrate nonahydrate > 98% for analysis, ACS

Revision date: 30.05.2022

Product code: 22852

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

1.1. Product identifier

Aluminium nitrate nonahydrate > 98% for analysis, ACS

CAS No: 7784-27-2

EC No: 236-751-8

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

Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name: Fa. Bernd Kraft GmbH

Street: Stempelstraße 6

Place: D-47167 Duisburg

Telephone: 0203/5194-0

Telefax: 0203/5194-290

e-mail: info@berndkraft.de

Contact person: Abteilung Produktsicherheit

Telephone: 0203/5194-107/117

e-mail: produktsicherheit@berndkraft.de

Internet: www.berndkraft.de

Responsible Department: Abteilung Produktsicherheit

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Ox. Sol. 3; H272

Skin Irrit. 2; H315

Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Signal word: Warning

Pictograms:



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Hazard statements

H272 May intensify fire; oxidiser.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements

P210
P221 Take any precaution to avoid mixing with combustibles.
P220 Keep away from clothing and other combustible materials.
P280
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Sum formula: $Al(NO_3)_3 \cdot 9 H_2O$
Molecular weight: 375,13 g/mol

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
7784-27-2	Aluminium nitrate-9-hydrate			100 %
	236-751-8			
	Ox. Sol. 3, Skin Irrit. 2, Eye Irrit. 2; H272 H315 H319			

Full text of H and EUH statements: see section 16.

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No data available

After inhalation

Provide fresh air.

After contact with skin

Wash immediately with: Water
Take off immediately all contaminated clothing and wash it before reuse.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.
Remove contact lenses, if present and easy to do. Continue rinsing.

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After ingestion

Rinse mouth immediately and drink plenty of water.
Call a physician immediately.

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

Irritant
Causes burns.
Risk of serious damage to eyes.
Cough
Vomiting
Methaemoglobinaemia

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-combustible solids
Material, oxygen-rich, Oxidising
Hazardous combustion products
In case of fire may be liberated:
Nitrogen oxides (NOx)

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.
In case of fire and/or explosion do not breathe fumes.
Avoid contact with skin, eyes and clothes.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Move undamaged containers from immediate hazard area if it can be done safely.
Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Provide adequate ventilation.
Use personal protection equipment.
Avoid contact with skin, eyes and clothes.
Remove persons to safety.
Emergency procedures
Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

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For containment

- Cover drains.
- Prevent spread over a wide area (e.g. by containment or oil barriers).
- Collect in closed and suitable containers for disposal.
- Take up carefully when dry. Take up dust-free and set down dust-free.

For cleaning up

- Clean contaminated articles and floor according to the environmental legislation.

Other information

- Provide adequate ventilation.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

- Safe handling: see section 7
- Personal protection equipment: see section 8
- Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

- Handle and open container with care.
- Provide adequate ventilation.
- Avoid contact with skin, eyes and clothes.
- Avoid dust formation. Do not breathe dust.

Advice on protection against fire and explosion

- Keep away from sources of ignition - No smoking.

Advice on general occupational hygiene

- Take off contaminated clothing.
- Wash hands before breaks and after work.
- When using do not eat or drink.

Further information on handling

- Take off contaminated clothing and wash it before reuse.
- Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

- Keep container tightly closed. Keep in a cool place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on joint storage

- Keep away from combustible material.
- Keep container tightly closed and dry.

Further information on storage conditions

- storage temperature +5°C +30°C

7.3. Specific end use(s)

- Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

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Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact

Trade name/designation: KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet (>, <) supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing. Take off immediately all contaminated clothing.

Wash hands before breaks and after work.

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Filtering device with filter or ventilator filtering device of type: P2

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	solid
Colour:	colourless
Odour:	like: Nitric acid
Odour threshold:	No data available

Changes in the physical state

Melting point/freezing point: 73 °C

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Boiling point or initial boiling point and boiling range:	135 °C
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
No data available:	
Flash point:	X
Flammability	
Solid/liquid:	not determined
Gas:	not applicable
Explosive properties	
No data available	
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Auto-ignition temperature:	No data available
Self-ignition temperature	
Solid:	not determined
Gas:	not applicable
Decomposition temperature:	135 °C
pH-Value (at 20 °C):	2,0-4,0 (50 g/l)
Viscosity / dynamic:	No data available
Viscosity / kinematic:	No data available
Flow time:	No data available
Water solubility: (at 20 °C)	41,9 g/L
Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	No data available
Vapour pressure:	No data available
Density:	1,72 g/cm ³
Bulk density:	880 kg/m ³
Relative vapour density:	not determined

9.2. Other information

Information with regard to physical hazard classes

Sustaining combustion:	No data available
Oxidizing properties	
The product is: oxidising, Oxidising.	

Other safety characteristics

Solvent separation test:	No data available
Solvent content:	0
Solid content:	100%
Evaporation rate:	not determined

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Corrosive to metals.

SECTION 10: Stability and reactivity

10.1. Reactivity

Possibility of hazardous reactions. oxidising, Oxidising.

10.2. Chemical stability

Moisture-sensitive.

10.3. Possibility of hazardous reactions

Reducing agent
ester
Strong acid
Isocyanates
Metal powder
SULPHUR

10.4. Conditions to avoid

Humidity
heat.

10.5. Incompatible materials

Keep away from combustible material.
Metal
Steel

10.6. Hazardous decomposition products

In case of fire may be liberated:
SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicokinetics, metabolism and distribution

There are no data available on the preparation/mixture itself.

Acute toxicity

Based on available data, the classification criteria are not met.

Irritation and corrosivity

Causes skin irritation.
Causes serious eye irritation.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

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Specific effects in experiment on an animal

There are no data available on the preparation/mixture itself.

Additional information on tests

There are no data available on the preparation/mixture itself.

Practical experience

There are no data available on the preparation/mixture itself.

Further information

There are no data available on the preparation/mixture itself.

SECTION 12: Ecological information

12.1. Toxicity

No data available

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

No data available

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not empty into drains.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)

<u>14.1. UN number or ID number:</u>	UN 1438
<u>14.2. UN proper shipping name:</u>	ALUMINIUM NITRATE
<u>14.3. Transport hazard class(es):</u>	5.1
<u>14.4. Packing group:</u>	III
Hazard label:	5.1
Classification code:	O2
Special Provisions:	274

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Limited quantity: 5 kg
 Excepted quantity: E1
 Transport category: 3
 Hazard No: 50
 Tunnel restriction code: E

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 1438
14.2. UN proper shipping name: ALUMINIUM NITRATE
14.3. Transport hazard class(es): 5.1
14.4. Packing group: III
 Hazard label: 5.1
 Classification code: O2
 Special Provisions: 274
 Limited quantity: 5 kg
 Excepted quantity: E1

Marine transport (IMDG)

14.1. UN number or ID number: UN 1438
14.2. UN proper shipping name: ALUMINIUM NITRATE
14.3. Transport hazard class(es): 5.1
14.4. Packing group: III
 Hazard label: 5.1
 Special Provisions: -
 Limited quantity: 5 kg
 Excepted quantity: E1
 EmS: F-A, S-Q

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 1438
14.2. UN proper shipping name: ALUMINIUM NITRATE
14.3. Transport hazard class(es): 5.1
14.4. Packing group: III
 Hazard label: 5.1
 Special Provisions: A803
 Limited quantity Passenger: 10 kg
 Passenger LQ: Y546
 Excepted quantity: E1
 IATA-packing instructions - Passenger: 559
 IATA-max. quantity - Passenger: 25 kg
 IATA-packing instructions - Cargo: 563
 IATA-max. quantity - Cargo: 100 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: Oxidising substances.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

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Information according to 2012/18/EU
(SEVESO III):

P8 OXIDISING LIQUIDS AND SOLIDS

National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D):

1 - slightly hazardous to water

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,4,5,7,9,12,14,15.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H272 May intensify fire; oxidiser.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.