

According to Regulation (EC) No 1907/2006

Aluminum sulfate hexadecahydrate



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

1.1. Product identifier

Trade name

Aluminum sulfate hexadecahydrate

CAS number

16828-11-8

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

Relevant identified uses

Research and development.

Not suitable for use in

Not suitable for human consumption or veterinary purposes.

1.3. Details of the supplier of the safety data sheet

Supplier

Molekula Group

Street address

Molekula Ltd, Lingfield Way, Darlington,
DL1 4XX Darlington
United Kingdom

Telephone

+44 (0) 3302 000 333

Email

info@molekula.com

Web site

www.molekula.com

Contact person

Kevin Banks

Email address

+44 (0) 7769276927

1.4. Emergency telephone number

Poison center/Additional emergency number

0344 892 0111 - National Poisons Information Service (Newcastle Centre)

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Classification

Serious eye damage, hazard category 1

Corrosive to metals, hazard category 1

Hazard statements

H290, H318

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms



Signal word

Danger

Hazard statements

H290 May be corrosive to metals.

H318 Causes serious eye damage.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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/doctor.

P406 Store in corrosive resistant container with a resistant inner liner.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

| Chemical name | CAS No. EC No. REACH No. Index No. | Concentration | Classification | H-phrase M factor acute M factor chronic | Note |
|----------------------------------|---|---------------|--------------------------|--|------|
| Aluminum sulfate hexadecahydrate | 16828-11-8 605-511-8 - - | 100% | Met. Corr. 1, Eye Dam. 1 | H290, H318 - - | - |

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Molecular weight

630.40

Substance additional information

For the complete text of H- / EUH-statements mentioned in this section, see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Get medical attention if any discomfort continues. Show this Safety Data Sheet (SDS) to medical personnel.

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. In case of persistent throat irritation or coughing: Seek medical attention and bring these instructions.

Skin contact

IF ON SKIN: Wash with plenty of water. Continue to rinse for at least 15 minutes and seek medical attention. Get medical advice/attention if you feel unwell.

Eye contact

Remove contact lenses if present. Rinse eyes with water. Continue to rinse for at least 15 minutes and seek medical attention.

Ingestion

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.

Information for doctors

First aiders/ medical personnel need to protect themselves.

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

The severity of the symptoms described will vary dependant of the concentration and the length of exposure.

Inhalation

Single exposure may cause the following adverse effects: Upper respiratory irritation. Difficulty in breathing.

Skin contact

Single exposure may cause the following adverse effects: Severe skin irritation.

Eye contact

Single exposure may cause the following adverse effects: Causes serious eye damage.

Ingestion

Single exposure may cause the following adverse effects: Severe abdominal pain. Nausea, vomiting.

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

Treat symptomatically. No special treatment requirement.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.

Unsuitable extinguishing media

No specific fire fighting procedure given.

5.2. Special hazards arising from the substance or mixture

Specific hazards: Corrosive.

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Carbon monoxide (CO). Carbon dioxide (CO₂). Sulphurous gases (SO_x). Aluminium Oxide.

5.3. Advice for firefighters

Special protective equipment for fire-fighters

Evacuate area. Avoid breathing gas, fume, vapours or spray. Prevent skin contact by maintaining a safe distance and by wearing suitable protective equipment/ clothing. Cool containers exposed to heat with water spray and remove container, if no risk is involved.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/spray. Avoid contact with skin and eyes.

In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. For personal protection, see section 8.

6.2. Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Collect with absorbent, non-combustible material into suitable containers.

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Preventive handling precautions

Avoid dust formation. Provide good ventilation.

General hygiene

Wash contaminated skin thoroughly after handling. For precautions see section 2.2.

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7.2. Conditions for safe storage, including any incompatibilities

Store in a dry place. Store in a closed container.
Store at ambient temperature.

7.3. Specific end use(s)

No specific usage precautions noted.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits

TWA: 2 mg/l UK. EH40 WEL = Workplace Exposure Limit.

8.2. Exposure controls

Eye / face protection

Wear eye protection.

Hand protection

Wear protective gloves.

Always inspect gloves before use. If signs of wear and tear are noticed then the gloves should be replaced.

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals. Wash contaminated skin thoroughly after handling.

Other skin protection

Wash skin thoroughly after handling.

Respiratory protection

Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided.

Environmental exposure controls

Avoid discharge into drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Solid

Colour

White.

Odour

No data available

Melting point / freezing point

No data available

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Boiling point or initial boiling point and boiling range

No data available

Flammability

No data available

Lower and upper explosion limit

No data available

Flash point

No data available

Auto-ignition temperature

No data available

Decomposition temperature

No data available

pH

No data available

Kinematic viscosity

No data available

Solubility

No data available

Partition coefficient n-octanol/water

No data available

Vapour pressure

No data available

Density and/or relative density

No data available

Relative vapour density

No data available

Particle characteristics

No data available

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

There are no known reactivity hazards associated with this product.

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10.2. Chemical stability

Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

Air
Moisture.

10.5. Incompatible materials

Strong oxidising substances, strong acids and strong bases. Ammonia or amines. Water.

10.6. Hazardous decomposition products

See section 5.

SECTION 11: Toxicological information

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

Acute toxicity

| Product / Substance name CAS / EC no. | Dose descriptor | Value / Dose | Test animals |
|--|-----------------------------|--------------|--------------|
| Aluminum sulfate hexadecahydrate 16828-11-8 / 605-511-8 | Acute Toxicity (Oral LD50): | 5000 mg/kg | Rat |

Skin corrosion/irritation

| Product / Substance name CAS / EC no. | Result | Species |
|--|---------------------|---------|
| Aluminum sulfate hexadecahydrate 16828-11-8 / 605-511-8 | No skin irritation. | Rabbit |

Serious eye damage/irritation

| Product / Substance name CAS / EC no. | Result | Species |
|--|------------------------|---------|
| Aluminum sulfate hexadecahydrate 16828-11-8 / 605-511-8 | Severe eye irritation. | Rabbit |

Carcinogenicity

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

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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.

11.2. Information on other hazards

No data available

SECTION 12: Ecological information

12.1. Toxicity

No data available

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal considerations

Dispose of contents/container in accordance with local regulations.

SECTION 14: Transport information

14.1. UN number

3260

14.2. UN proper shipping name

ADR / RID / ADN proper shipping name

CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

IMDG proper shipping name

CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

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IATA proper shipping name

Corrosive solid, acidic, inorganic, n.o.s.

14.3. Transport hazard class(es)

Label

ADR/RID/ADN



8

IMDG



8

IATA



8

ADR / RID Class

8

ADR / RID Classification code

C2

ADR / RID hazard identification number

80

IMDG Class

8

IATA Class

8

ADN Class

8

ADN Class Code

C2

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14.4. Packing group

ADR / RID / ADN: III

IMDG: III

IATA: III

14.5. Environmental hazards

IMDG EmS

F-A, S-B

14.6. Special precautions for user

Tunnel restriction code: E

Transport category: 3

14.7. Maritime transport in bulk according to IMO instruments

IBC Instruction: IBC08

SECTION 15: Regulatory information

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

EU regulations

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

National regulations

No data available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Phrase meaning

Eye Dam. 1 - Serious eye damage, hazard category 1

Met. Corr. 1 - Corrosive to metals, hazard category 1

H290 May be corrosive to metals.

H318 Causes serious eye damage.