

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 12.07.2023

Version number 1

Revision: 12.07.2023

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

- **1.1 Product identifier**
- **Trade name:** *Aluminum sulphate ground 17/18 %*
- **Chemical Identification:** *Aluminium sulphate tetradecahydrate*
- **Article number:** *9*
- **CAS Number:**  
*16828-12-9*
- **EC number:**  
*233-135-0*
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
*No further relevant information available.*
- **Application of the substance / the mixture**  
*Flocculant/ Flocculating agent*  
*Aids for water treatment.*
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
*Möller Chemie GmbH & Co. KG*  
*Bürgerkamp 1*  
*D-48565 Steinfurt*  
*Tel.: 02551/9340-0*  
*Fax: 02551/9340-60*
- **Further information obtainable from:** *Product safety department*
- **1.4 Emergency telephone number:**  
*Poison Control Center Mainz - 24 hour emergency service - Tel.: +49 (0) 6131/19240*

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS05 corrosion

*Eye Dam. 1 H318 Causes serious eye damage.*

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
*The substance is classified and labelled according to the CLP regulation.*
- **Hazard pictograms**



GHS05

- **Signal word** *Danger*
- **Hazard statements**  
*H318 Causes serious eye damage.*
- **Precautionary statements**  
*P280 Wear 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.*
- **2.3 Other hazards**  
*The product does not contain any substance above the legal limits included on the list for endocrine disrupting properties established under Article 59(1) of Regulation (EC) No 1907/2006 or under Commission Delegated Regulation (EU) 2017/2100 or of Commission Regulation (EU) 2018/605 has endocrine disrupting properties.*

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- **Results of PBT and vPvB assessment**
- **PBT:**  
The product does not contain any substances above legal limits that meet the criteria for PBT (persistent, bioaccumulative and toxic).
- **vPvB:**  
The product does not contain any substances above legal limits that meet the criteria for vPvB (very persistent and very bioaccumulative).

### SECTION 3: Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description**  
16828-12-9 Aluminium sulphate tetradecahydrate
- **Identification number(s)**
- **EC number:** 233-135-0

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**  
Immediately remove any clothing soiled by the product.  
If symptoms occur or if in doubt, seek medical advice.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly.  
If skin irritation continues, consult a doctor.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. Then consult a doctor.  
Remove any existing contact lenses if possible. Continue rinsing.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Do not induce vomiting.  
Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**  
Nausea  
Irritation of the eyes
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** CO<sub>2</sub>, powder or water spray. Fight larger fire with alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Sulphur dioxide (SO<sub>2</sub>)  
Metal oxides
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Avoid formation of dust.

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*Avoid contact with eyes and skin*

*Ensure adequate ventilation*

*Use personal protective equipment.*

· **6.2 Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.*

· **6.3 Methods and material for containment and cleaning up:**

*Pick up mechanically.*

*Collect in suitable, closed containers and dispose of.*

*Dispose contaminated material as waste according to item 13.*

· **6.4 Reference to other sections**

*See Section 7 for information on safe handling.*

*See Section 8 for information on personal protection equipment.*

*See Section 13 for disposal information.*

### SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

*Prevent formation of dust.*

*Ensure good ventilation/exhaustion at the workplace.*

· **Information about fire - and explosion protection:** *No special measures required.*

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

*Keep container tightly closed in a dry, cool, well-ventilated place.*

*Protect from moisture.*

· **Information about storage in one common storage facility:**

*Store away from oxidising agents.*

*Store separately from bases.*

*Store away from foodstuffs.*

· **Further information about storage conditions:**

*Store in dry conditions.*

*Product is hygroscopic.*

· **Storage class:** 13

· **7.3 Specific end use(s)** *No further relevant information available.*

### SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:** *Not required.*

· **DNELs**

*workers:*

*Long-term systematic effect, dermal: 3.8 mg/kg body weight/day*

*Long-term systematic effect, inhalative: 13.4 mg/m<sup>3</sup>*

*general population:*

*Long-term systematic effect, oral: 1.9 mg/kg body weight/day*

*Long-term systematic effect, inhalative: 3.3 mg/m<sup>3</sup>*

*Long-term systematic effect, dermal: 1.9 mg/kg body weight/day*

· **Additional information:** *The lists valid during the making were used as basis.*

· **8.2 Exposure controls**

· **Appropriate engineering controls** *No further data; see item 7.*

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

*The usual precautionary measures are to be adhered to when handling chemicals.*

*Keep away from foodstuffs, beverages and feed.*

· **Respiratory protection:**

*In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.*

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· **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

Butyl rubber, BR  
Nitrile rubber, NBR  
Natural rubber, NR  
PVC gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye/face protection**



Tightly sealed goggles

· **Body protection:** Protective work clothing

## SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

|                                                                   |                           |
|-------------------------------------------------------------------|---------------------------|
| · <b>Colour:</b>                                                  | Colourless                |
| · <b>Odour:</b>                                                   | Odourless                 |
| · <b>Melting point/freezing point:</b>                            | 650 °C                    |
| · <b>Boiling point or initial boiling point and boiling range</b> | Not applicable            |
| · <b>Flammability</b>                                             | Product is not flammable. |
| · <b>Flash point:</b>                                             | not applicable            |
| · <b>Decomposition temperature:</b>                               | >400 °C                   |
| · <b>pH (10 g/l) at 20 °C</b>                                     | ~3                        |
| · <b>Solubility</b>                                               |                           |
| · <b>water at 20 °C:</b>                                          | 629 g/l                   |
| · <b>Partition coefficient n-octanol/water (log value)</b>        | -2 log POW                |
| · <b>Density and/or relative density</b>                          |                           |
| · <b>Density at 20 °C:</b>                                        | 1.7 g/cm <sup>3</sup>     |
| · <b>Particle characteristics</b>                                 | See item 3.               |

· **9.2 Other information**

|                                                                                        |                                               |
|----------------------------------------------------------------------------------------|-----------------------------------------------|
| · <b>Appearance:</b>                                                                   | hygroscopic                                   |
| · <b>Form:</b>                                                                         | Solid                                         |
| · <b>Important information on protection of health and environment, and on safety.</b> |                                               |
| · <b>Explosive properties:</b>                                                         | Product does not present an explosion hazard. |
| · <b>Molecular weight</b>                                                              | 594.14 g/mol                                  |

· **Information with regard to physical hazard classes**

|                          |      |
|--------------------------|------|
| · <b>Explosives</b>      | Void |
| · <b>Flammable gases</b> | Void |
| · <b>Aerosols</b>        | Void |

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|                                                                                    |      |
|------------------------------------------------------------------------------------|------|
| · <b>Oxidising gases</b>                                                           | Void |
| · <b>Gases under pressure</b>                                                      | Void |
| · <b>Flammable liquids</b>                                                         | Void |
| · <b>Flammable solids</b>                                                          | Void |
| · <b>Self-reactive substances and mixtures</b>                                     | Void |
| · <b>Pyrophoric liquids</b>                                                        | Void |
| · <b>Pyrophoric solids</b>                                                         | Void |
| · <b>Self-heating substances and mixtures</b>                                      | Void |
| · <b>Substances and mixtures, which emit flammable gases in contact with water</b> | Void |
| · <b>Oxidising liquids</b>                                                         | Void |
| · <b>Oxidising solids</b>                                                          | Void |
| · <b>Organic peroxides</b>                                                         | Void |
| · <b>Corrosive to metals</b>                                                       | Void |
| · <b>Desensitised explosives</b>                                                   | Void |

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability** No decomposition if stored and applied as directed.
- **Thermal decomposition / conditions to be avoided:** Heat, sunlight.
- **10.3 Possibility of hazardous reactions**  
Exothermic reaction with strong bases and acids.  
Oxidising agent.
- **10.4 Conditions to avoid** Avoid all sources of ignition: heat, sparks, open flames.
- **10.5 Incompatible materials:**  
Strong oxidizing agents  
Alkalis  
metals
- **10.6 Hazardous decomposition products:**  
Sulphur dioxide  
Reasonably to be expected, dangerous decomposition products, which are formed during use, storage, spillage and heating, are not known.

### SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:**  
LD50/oral >2000 mg/kg (rat)  
LD50/dermal >5000 mg/kg body weight (rat)
- **Skin corrosion/irritation** May cause slight skin irritation.
- **Serious eye damage/irritation**  
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** 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.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

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### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**  
Aluminium sulphate  
LC50, *Brachydanio rerio* (zebrafish): > 1000 mg/L (96 h) Method: OECD 203
- **12.2 Persistence and degradability** Not applicable for inorganic substances
- **12.3 Bioaccumulative potential** Not relevant for inorganic substances.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** The product is not considered to be persistent, bioaccumulating nor toxic (PBT).
- **vPvB:** The product is not considered to be persistent or very bioaccumulative (vPvB).
- **12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow product to reach ground water, water course or sewage system.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Disposal according to local regulations.  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

- |                                                                                                                                                           |                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| <ul style="list-style-type: none"> <li>· <b>14.1 UN number or ID number</b></li> <li>· <b>ADR, ADN, IMDG, IATA</b></li> </ul>                             | Void            |
| <ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR, ADN, IMDG, IATA</b></li> </ul>                            | Void            |
| <ul style="list-style-type: none"> <li>· <b>14.3 Transport hazard class(es)</b></li> <li>· <b>ADR, ADN, IMDG, IATA</b></li> <li>· <b>Class</b></li> </ul> | Void            |
| <ul style="list-style-type: none"> <li>· <b>14.4 Packing group</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>                                           | Void            |
| <ul style="list-style-type: none"> <li>· <b>14.5 Environmental hazards:</b></li> </ul>                                                                    | Not applicable. |
| <ul style="list-style-type: none"> <li>· <b>14.6 Special precautions for user</b></li> </ul>                                                              | Not applicable. |
| <ul style="list-style-type: none"> <li>· <b>14.7 Maritime transport in bulk according to IMO instruments</b></li> </ul>                                   | Not applicable. |
| <ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>                                                                         | Void            |

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No further relevant information available.

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**15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.**SECTION 16: Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

**Department issuing SDS:** Product safety department**Contact:** Mrs. Steyer**Abbreviations and acronyms:**

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*

*ICAO: International Civil Aviation Organisation*

*ADR: Accord relatif au transport international 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 Harmonised System of Classification and Labelling of Chemicals*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*DNEL: Derived No-Effect Level (REACH)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*Eye Dam. 1: Serious eye damage/eye irritation – Category 1*

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