

## 1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

**Product identifier:** Aluminium Sulphate  
**CAS:** 10043-01-3  
**Other means of identification:** Non-applicable

### Relevant identified uses of the substance or mixture and uses advised against:

**Relevant uses:** Chemical industry. For professional users/industrial user only.  
**Uses advised against:** All uses not specified in this section or in section 7.3

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## 2. HAZARDS IDENTIFICATION

### Classification of the substance or mixture:

**GB CLP Regulation:** Classification of this product has been carried out in accordance with GB CLP Regulation.  
Eye Dam. 1: Serious eye damage, Category 1, H318  
Met. Corr. 1: Corrosive to metals, Category 1, H290

### Label elements:

**GB CLP Regulation:**



Danger

**Hazard statements:** Eye Dam. 1: H318 - Causes serious eye damage.  
Met. Corr. 1: H290 - May be corrosive to metals.

# SAFETY DATA SHEET

## Aluminium Sulphate Solid

Issued: 05/10/2021

Page 2

**Precautionary statements:**

- P234: Keep only in original container.
- P280: Wear protective gloves/protective clothing/eye 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.
- P390: Absorb spillage to prevent material damage.
- P406: Store in a container resistant to corrosion with a resistant inner lining.

**Other hazards:** Non-applicable

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Substance:**

**Chemical description:** Chemical substance

**Components:**

**In accordance with Annex II of The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020, the product contains:**

Identification	Chemical name/Classification	Concentration
CAS: 10043-01-3	Eye Dam. 1: H318; Met. Corr. 1: H290 - Danger	Aluminium sulphate 95 - <100 %

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

**Mixture:** Non-applicable

### 4. FIRST AID MEASURES

**Description of first aid measures:** The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

**By inhalation:** This product does not contain substances classified as hazardous for inhalation, however, in case of symptoms of intoxication remove the person affected from the exposure area and provide with fresh air. Seek medical attention if the symptoms get worse or persist.

**By skin contact:** In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of changes to the skin (stinging, redness, rashes, blisters,...), seek medical advice with this Safety data Sheet

**By eye contact:** Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

**By ingestion/aspiration:** In case of consumption, seek immediate medical assistance showing the SDS for the product.

**Most important symptoms and effects, both acute and delayed:** Acute and delayed effects are indicated in sections 2 and 11.

**Indication of any immediate medical attention and special treatment needed:** Non-applicable.

[cont...]

## 5. FIRE-FIGHTING MEASURES

### Extinguishing media:

**Suitable extinguishing media:** Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

**Unsuitable extinguishing media:** Non-applicable

**Special hazards arising from the substance or mixture:** As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

**Advice for firefighters:** Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...).

**Additional provisions:** Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures:

**For non-emergency personnel:** Sweep up and shovel product or collect by other means and place in container for reuse (preferred) or disposal.

**For emergency responders:** See section 8.

**Environmental precautions:** This product is not classified as hazardous to the environment. Keep product away from drains, surface and underground water.

### Methods and material for containment and cleaning up:

**It is recommended:** Sweep up and shovel product or collect by other means and place in container for reuse (preferred) or disposal

**Reference to other sections:** See sections 8 and 13.

## 7. HANDLING AND STORAGE

### Precautions for safe handling:

A.- Precautions for safe manipulation.

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

# SAFETY DATA SHEET

## Aluminium Sulphate Solid

Issued: 05/10/2021

Page 4

B.- Technical recommendations for the prevention of fires and explosions.

Due to its inflammable nature, the product does not present a fire risk under normal conditions of storage, handling and use.

C.- Technical recommendations to prevent ergonomic and toxicological risks.

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks.

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

### Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage.

Minimum Temp.: 2 °C

Maximum Temp.: 35 °C

Maximum time: 24 Months

B.- General conditions for storage.

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5.

**Specific end use(s):** Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Control parameters:** Substances whose occupational exposure limits have to be monitored in the workplace:  
Nuisance dust: Inhalable dust 10 mg/m<sup>3</sup> // Respirable dust 4 mg/m<sup>3</sup>

### Exposure controls:

A.- Individual protection measures, such as personal protective equipment.

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<UKCA marking>>. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

### B.- Respiratory protection:

Pictogram	PPE	Remarks
	Filter mask for particles	Replace when an increase in resistance to breathing is observed.




Compulsory use of face mask

[cont...]

**C.- Specific protection for the hands:**

Pictogram	PPE	Remarks
	Protective gloves against minor risks	Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420:2004+A1:2010 and EN ISO 374-1:2016+ A1:2018.
Mandatory hand protection		

**D.- Ocular and facial protection:**

Pictogram	PPE	Remarks
	Panoramic glasses against splash/projections.	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.
Mandatory face protection		

**E.- Body protection**

Pictogram	PPE	Remarks
	<b>Work clothing</b>	Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 6529:2013, EN ISO 6530:2005, EN ISO 13688:2013, EN 464:1994.
	<b>Anti-slip work shoes</b>	Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 20345:2012 y EN 13832-1:2007.

**F.- Additional emergency measures**

Emergency measure	Standards	Emergency measure	Standards
	ANSI Z358-1 ISO 3864-1:2011 ISO 3864-4:2011		DIN 12 899 ISO 3864-1:2011 ISO 3864-4:2011
Emergency shower		Eyewash stations	

**Environmental exposure controls:** In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

[cont...]

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties:** For complete information see the product datasheet.

**Appearance:**

**Physical state at 20 °C:** Solid

\*Not relevant due to the nature of the product, not providing information property of its hazards.

**Appearance:** Crystals

**Colour:** White

**Odour:** Odourless

**Odour threshold:** Non-applicable \*

**Volatility:**

**Boiling point at atmospheric pressure:** Non-applicable \*

**Vapour pressure at 20 °C:** Non-applicable \*

**Vapour pressure at 50 °C:** Non-applicable \*

**Evaporation rate at 20 °C:** Non-applicable \*

**Product description:**

**Density at 20 °C:** 2672 kg/m<sup>3</sup>

**Relative density at 20 °C:** 2.672

**Dynamic viscosity at 20 °C:** Non-applicable \*

**Kinematic viscosity at 20 °C:** Non-applicable \*

**Kinematic viscosity at 40 °C:** Non-applicable \*

**Concentration:** Non-applicable \*

**pH:** Non-applicable \*

**Vapour density at 20 °C:** Non-applicable \*

**Partition coefficient n-octanol/water 20 °C:** Non-applicable \*

**Solubility in water at 20 °C:** 313 kg/m<sup>3</sup>

**Solubility properties:** Non-applicable \*

**Decomposition temperature:** Non-applicable \*

**Melting point/freezing point:** 770 °C

**Flammability:**

**Flash Point:** Non-applicable

**Flammability (solid, gas):** Non-applicable \*

**Autoignition temperature:** Non-applicable \*

**Lower flammability limit:** Non-applicable \*

**Upper flammability limit:** Non-applicable \*

**Explosive:**

**Lower explosive limit:** Non-applicable \*

**Upper explosive limit:** Non-applicable \*

**Particle characteristics:**

**Median equivalent diameter:** Non-applicable \*

# SAFETY DATA SHEET

## Aluminium Sulphate Solid

Issued: 05/10/2021

Page 7

### Other information:

#### Information with regard to physical hazard classes:

**Explosive properties:** Non-applicable \*

**Oxidising properties:** Non-applicable \*

**Corrosive to metals:** H290 May be corrosive to metals.

**Heat of combustion:** Non-applicable \*

**Aerosols-total percentage (by mass) of flammable components:** Non-applicable \*

#### Other safety characteristics:

**Surface tension at 20 °C:** Non-applicable \*

**Refraction index:** Non-applicable \*

\*Not relevant due to the nature of the product, not providing information property of its hazards.

## 10. STABILITY AND REACTIVITY

**Reactivity:** No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

**Chemical stability:** Chemically stable under the conditions of storage, handling and use.

**Possibility of hazardous reactions:** Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

#### Conditions to avoid:

##### Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

#### Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Precaution	Not applicable	Avoid alkalis or strong bases

**Hazardous decomposition products:** See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products.

Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

## 11. TOXICOLOGICAL INFORMATION

**Information on toxicological effects:** The experimental information related to the toxicological properties of the product itself is not available.

**Dangerous health implications:** In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure.

[cont...]

**SAFETY DATA SHEET**  
Aluminium Sulphate Solid

Issued: 05/10/2021

Page 8

**A- Ingestion (acute effect):**

**Acute toxicity:** Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for consumption. For more information see section 3.

**Corrosivity/Irritability:** Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**B- Inhalation (acute effect):**

**Acute toxicity:** Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for inhalation. For more information see section 3.

**Corrosivity/Irritability:** Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**C- Contact with the skin and the eyes (acute effect):**

**Contact with the skin:** Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for skin contact. For more information see section 3.

**Contact with the eyes:** Produces serious eye damage after contact.

**D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):**

**Carcinogenicity:** Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.

**IARC:** Non-applicable.

**Mutagenicity:** Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**Reproductive toxicity:** Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**E- Sensitizing effects:**

**Respiratory:** Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.

**Cutaneous:** Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**F- Specific target organ toxicity (STOT) - single exposure:**

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

[cont...]



# SAFETY DATA SHEET

## Aluminium Sulphate Solid

Issued: 05/10/2021

Page 9

### G- Specific target organ toxicity (STOT)-repeated exposure:

**Specific target organ toxicity (STOT)-repeated exposure:** Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**Skin:** Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**H- Aspiration hazard:** Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**Other information:** Non-applicable

### Specific toxicology information on the substances:

Identification	Acute toxicity	Genus
Aluminium Sulphate	LD50 oral 6207 mg/kg	Mouse
CAS: 10043-01-3	LD50 dermal >5000 mg/kg	
	LC50 inhalation >5 mg/L	

## 12. ECOLOGICAL INFORMATION

### Toxicity:

#### Product-specific aquatic toxicity:

Acute toxicity	Species	Genus
LC50 33.9 mg/L (96 h)	Non-applicable	Fish
EC50 38.2 mg/L (48 h)	Non-applicable	Crustacean

#### Substance-specific aquatic toxicity:

##### Acute toxicity:

Identification	Concentration	Species	Genus
Aluminium sulphate	LC50 33.9 mg/L (96 h)	Pimephales promelas	Fish
CAS: 10043-01-3	EC50 38.2 mg/L (48 h)	Daphnia magna	Crustacean
	EC50 Non-applicable		

##### Chronic toxicity:

Identification	Concentration	Species	Genus
Aluminium sulphate	NOEC 0.014 mg/L	Salvelinus fontinalis	Fish
CAS: 10043-01-3	NOEC 3.8 mg/L	Ceriodaphnia dubia	Crustacean

**Persistence and degradability:** Not available.

**Bioaccumulative potential:** Not available.

**Mobility in soil:** Not available.

**Results of PBT and vPvB assessment:** Non-applicable.

**Other adverse effects:** Not described.

[cont...]

### 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods:**


**Waste management (disposal and evaluation):** Consult the authorized waste service manager on the assessment and disposal operations in accordance The Waste Regulations 2011, 2011 No. 988. As under 15 01 of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommended disposal down the drain. See paragraph 6.2.

**Regulations related to waste management:** In accordance with Annex II of UK REACH the provisions related to waste management are stated UK legislation: The Waste Regulations 2011.

### 14. TRANSPORT INFORMATION

**Transport of dangerous goods by land:**


**With regard to ADR 2021 and RID 2021:**

<b>UN number:</b>	UN3260	
<b>UN proper shipping name:</b>	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (aluminium sulphate)	
<b>Transport hazard class(es):</b>	8	
<b>Labels:</b>	8	
<b>Packing group:</b>	III	
<b>Environmental hazards:</b>	No	
<b>Special precautions for user:</b>		
<b>Physico-Chemical properties:</b>	See section 9	

**Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

**Transport of dangerous goods by sea:**

**With regard to IMDG 39-18:**

<b>UN number:</b>	UN3260	
<b>UN proper shipping name:</b>	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (aluminium sulphate)	
<b>Transport hazard class(es):</b>	8	
<b>Labels:</b>	8	
<b>Packing group:</b>	III	
<b>Marine pollutant:</b>	No	
<b>Special precautions for user:</b>		
<b>Special regulations:</b>	274, 223	
<b>EmS Codes:</b>	F-A, S-B	
<b>Physico-Chemical properties:</b>	See section 9	
<b>Limited quantities:</b>	5 kg	
<b>Segregation group:</b>	SGG1	

**Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable.

# SAFETY DATA SHEET

## Aluminium Sulphate Solid

Issued: 05/10/2021

Page 11

### Transport of dangerous goods by air:

#### With regard to IATA/ICAO 2021:

UN number:	UN3260
UN proper shipping name:	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (aluminium sulphate)
Transport hazard class(es):	8
Labels:	8
Packing group:	III
Environmental hazards:	No
Special precautions for user:	
Physico-Chemical properties:	See section 9
Transport in bulk according to Annex II of Marpol and the IBC Code:	Non-applicable.



## 15. REGULATORY INFORMATION

Other legislation:	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020. The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019. Control of Substances Hazardous to Health Regulations 2002 (as amended) EH40/2005 Workplace exposure limits.
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Note:	The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.
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## 16. OTHER INFORMATION

### Texts of the legislative phrases mentioned in section 2:

H290: May be corrosive to metals.  
H318: Causes serious eye damage.

### Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

GB CLP Regulation:	Eye Dam. 1: H318 - Causes serious eye damage. Met. Corr. 1: H290 - May be corrosive to metals.
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Advice related to training:	Minimal training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.
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[cont...]

**SAFETY DATA SHEET**  
Aluminium Sulphate Solid

Issued: 05/10/2021

Page 12

**Abbreviations and acronyms:** ADR: European agreement concerning the international carriage of dangerous goods by road.  
IMDG: International maritime dangerous goods code.  
IATA: International Air Transport Association.  
ICAO: International Civil Aviation Organisation.  
COD: Chemical Oxygen Demand.  
BOD5: 5day Biochemical Oxygen Demand.  
BCF: Bioconcentration factor.  
LD50: Lethal Dose 50.  
LC50: Lethal Concentration 50.  
EC50: Effective concentration 50.  
LogPOW: Octanolwater partition coefficient.  
Koc: Partition coefficient of organic carbon.  
UFI: unique formula identifier.  
IARC: International Agency for Research on Cancer.

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