



SAFETY DATA SHEET ALUMINIUM SULPHATE SOLID

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

1.1. Product identifier

Product name	ALUMINIUM SULPHATE SOLID
Product number	11986
Synonyms; trade names	GOLDIFLOC FILTER AID TABLETS, BRISWIM FLOC, ALUMINIUM SULPHATE 0-2 MM 17-18%, ALUMINIUM SULPHATE 2-8 MM 17/18%, FILTER AID TAB, FLOC GRANULES, ALUMINIUM SULPHATE 15% SLAB, ALUM SULPHATE HG 17%, AQUAEASY GOLDIFLOC TAB

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

Identified uses	Water Treatment ADDITIVE Adhesive. Resin.
Uses advised against	No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier	Univar Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 sds@univar.com +44 1274 267306
----------	--

1.4. Emergency telephone number

Emergency telephone	SGS - +32 (0)3 575 55 55 (24h)
Sds No.	11986

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Eye Dam. 1 - H318
Environmental hazards	Not Classified

Classification (67/548/EEC or 1999/45/EC) Xi;R41.

2.2. Label elements

ALUMINIUM SULPHATE SOLID

Pictogram



Signal word	Danger
Hazard statements	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.
Contains	ALUMINIUM SULPHATE

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

ALUMINIUM SULPHATE	> 15
CAS number: 10043-01-3	EC number: 233-135-0
	REACH registration number: 01-2119531538-36
Classification	Classification (67/548/EEC or 1999/45/EC)
Met. Corr. 1 - H290	Xi;R41.
Eye Dam. 1 - H318	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
Ingestion	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Give plenty of water to drink. Do not induce vomiting. Get medical attention.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.

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

Eye contact	Risk of serious damage to eyes. May cause permanent damage if eye is not immediately irrigated.
--------------------	---

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

Notes for the doctor	Treat symptomatically.
-----------------------------	------------------------

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use fire-extinguishing media suitable for the surrounding fire.
-------------------------------------	---

ALUMINIUM SULPHATE SOLID

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Sulphurous gases (SO_x).

5.3. Advice for firefighters

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of dust. Avoid contact with eyes. Provide adequate ventilation.

6.2. Environmental precautions

Environmental precautions Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Provide adequate ventilation. Avoid handling which leads to dust formation. Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store away from the following materials: Acids. Oxidising materials. Metals The substance is hygroscopic and will absorb water by contact with the moisture in the air.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

DNEL Industry - Inhalation; Long term systemic effects: 20.2 mg/m³
Consumer - Oral; Long term systemic effects: 3.4 mg/kg/day

PNEC - STP; 20 mg/l

ALUMINIUM SULPHATE (CAS: 10043-01-3)

Ingredient comments WEL = Workplace Exposure Limits

ALUMINIUM SULPHATE SOLID

DNEL

Consumer - Oral; : 3700 mg/kg/day
Industry - Oral; : 5700 mg/kg/day

PNEC

Not available.

8.2. Exposure controls

Protective equipment



Eye/face protection

The following protection should be worn: Chemical splash goggles.

Hand protection

The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. Rubber (natural, latex). Neoprene. Polyvinyl chloride (PVC). To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection

Wear appropriate clothing to prevent repeated or prolonged skin contact.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Particulate filter, type P2.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Solid
Colour	White.
Odour	Slight.
Odour threshold	No information available.
pH	pH (diluted solution): ~ 3.1 %
Melting point	>300°C
Initial boiling point and range	No information available.
Flash point	Scientifically unjustified.
Evaporation rate	Not applicable.
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	No information available.
Other flammability	No information available.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Relative density	No information available.
Bulk density	1690 kg/m ³

ALUMINIUM SULPHATE SOLID

Solubility(ies)	Soluble in water.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Decomposition Temperature	Not available.
Viscosity	Not applicable.
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	No information available.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information	No information required.
Refractive index	No information available.
Particle size	No information available.
Molecular weight	No information available.
Volatility	No information available.
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.
-------------------	---

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.
------------------	---

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not available.
---	----------------

10.4. Conditions to avoid

Conditions to avoid	Avoid excessive heat for prolonged periods of time. Water, moisture.
----------------------------	--

10.5. Incompatible materials

Materials to avoid	Strong alkalis. Metals Strong oxidising agents.
---------------------------	---

10.6. Hazardous decomposition products

Hazardous decomposition products	Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Sulphurous gases (SO _x).
---	---

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ALUMINIUM SULPHATE SOLID

Acute toxicity oral (LD₅₀ mg/kg)	2,000.0
Species	Rat
<u>Acute toxicity - dermal</u>	
Acute toxicity dermal (LD₅₀ mg/kg)	5,000.0
Species	Rabbit
<u>Skin corrosion/irritation</u>	
Animal data	Not irritating.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Moderately irritating.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	No information available.
<u>Skin sensitisation</u>	
Skin sensitisation	Not sensitising.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	This substance has no evidence of mutagenic properties.
<u>Carcinogenicity</u>	
Carcinogenicity	There is no evidence that the product can cause cancer.
<u>Reproductive toxicity</u>	
Reproductive toxicity - development	This substance has no evidence of toxicity to reproduction.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	No information available.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	No information available.
<u>Aspiration hazard</u>	
Aspiration hazard	Not applicable.
<u>Inhalation</u>	
Inhalation	Dust may irritate the respiratory system.
<u>Ingestion</u>	
Ingestion	Gastrointestinal symptoms, including upset stomach.
<u>Skin contact</u>	
Skin contact	Skin irritation should not occur when used as recommended.
<u>Eye contact</u>	
Eye contact	Risk of serious damage to eyes.

ALUMINIUM SULPHATE

Inhalation	Dust in high concentrations may irritate the respiratory system.
Ingestion	May cause discomfort if swallowed.
Skin contact	Powder may irritate skin.

ALUMINIUM SULPHATE SOLID

Eye contact Irritating to eyes.

SECTION 12: Ecological Information

Ecotoxicity The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

ALUMINIUM SULPHATE

Ecotoxicity The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.1. Toxicity

Acute toxicity - fish LC₅₀, 96 hours: 142 mg/l,

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 38 mg/l,

ALUMINIUM SULPHATE

Toxicity Not considered toxic to fish.

12.2. Persistence and degradability

Persistence and degradability The product contains only inorganic substances which are not biodegradable.

Biodegradation Scientifically unjustified.

ALUMINIUM SULPHATE

Persistence and degradability There are no data on the degradability of this product.

12.3. Bioaccumulative potential

Partition coefficient No information available.

ALUMINIUM SULPHATE

Bioaccumulative potential No data available on bioaccumulation.

12.4. Mobility in soil

Mobility The product is soluble in water.

ALUMINIUM SULPHATE

Mobility Not determined.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

ALUMINIUM SULPHATE

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

ALUMINIUM SULPHATE SOLID

12.6. Other adverse effects

Other adverse effects None known.

ALUMINIUM SULPHATE

Other adverse effects No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste should be treated as controlled waste.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78

and the IBC Code

SECTION 15: Regulatory information

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

EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Commission Regulation (EU) No 2015/830 of 28 May 2015.

15.2. Chemical safety assessment

ALUMINIUM SULPHATE SOLID

No chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	<p>ATE: Acute Toxicity Estimate.</p> <p>ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.</p> <p>ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.</p> <p>CAS: Chemical Abstracts Service.</p> <p>DNEL: Derived No Effect Level.</p> <p>IATA: International Air Transport Association.</p> <p>IMDG: International Maritime Dangerous Goods.</p> <p>Kow: Octanol-water partition coefficient.</p> <p>LC₅₀: Lethal Concentration to 50 % of a test population.</p> <p>LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).</p> <p>PBT: Persistent, Bioaccumulative and Toxic substance.</p> <p>PNEC: Predicted No Effect Concentration.</p> <p>REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.</p> <p>RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.</p> <p>vPvB: Very Persistent and Very Bioaccumulative.</p> <p>IARC: International Agency for Research on Cancer.</p> <p>MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.</p> <p>cATpE: Converted Acute Toxicity Point Estimate.</p> <p>BCF: Bioconcentration Factor.</p> <p>BOD: Biochemical Oxygen Demand.</p> <p>EC₅₀: 50% of maximal Effective Concentration.</p> <p>LOAEC: Lowest Observed Adverse Effect Concentration.</p> <p>LOAEL: Lowest Observed Adverse Effect Level.</p> <p>NOAEC: No Observed Adverse Effect Concentration.</p> <p>NOAEL: No Observed Adverse Effect Level.</p> <p>NOEC: No Observed Effect Concentration.</p> <p>LOEC: Lowest Observed Effect Concentration.</p> <p>DMEL: Derived Minimal Effect Level.</p> <p>EL50: Exposure Limit 50</p> <p>hPa: Hectopascal</p> <p>LL50: Lethal Loading fifty</p> <p>OECD: Organisation for Economic Co-operation and Development</p> <p>POW: Octanol-water partition coefficient</p> <p>SCBA: self-contained breathing apparatus</p> <p>STP: Sewage Treatment Plant</p> <p>VOC: Volatile Organic Compounds</p>
Classification abbreviations and acronyms	<p>Acute Tox. = Acute toxicity</p> <p>Aquatic Acute = Hazardous to the aquatic environment (acute)</p> <p>Aquatic Chronic = Hazardous to the aquatic environment (chronic)</p>
Key literature references and sources for data	<p>Supplier's information.</p>
Revision comments	<p>NOTE: Lines within the margin indicate significant changes from the previous revision.</p>
Revision date	<p>18/04/2017</p>

ALUMINIUM SULPHATE SOLID

Revision	05
Supersedes date	02/09/2016
SDS number	11986
Version number	1.003
SDS status	Approved.
Signature	Lisa Bland
Risk phrases in full	R41 Risk of serious damage to eyes.
Hazard statements in full	H290 May be corrosive to metals. H318 Causes serious eye damage.