



Chemifloc Ltd.

SAFETY DATA SHEET Aluminium Iron(III) Sulfate Liquid

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II

1: Identification of the substance/preparation and of the company/undertaking

Identification of the substance or mixture

Product Name: Chemifloc 101, Chemifloc 202, Aluminium and iron Sulfate,

Chemical Name: Aluminium Iron(III) Sulfate

Use of the mixture:

Used as a chemical for the treatment of drinking water, has received appropriate approval by the European Committee for Standardisation.

Company/Undertaking identification

Manufacturer/Supplier: Chemifloc Ltd
Smithstown, Shannon,
Co. Clare,
Rep. of Ireland.
Tel: 00353 61 708699
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Emergency Telephone Number: 00353 61 708699

2: Hazards Identification

Aluminium Iron(III) Sulfate Solution is classed as **Irritant**. This substance is not classified in the Annex I of Directive 67/548/EEC.

Risk of damage to eyes. Prolonged contact with skin may cause possible dermatitis.

NOTE Annex I of the Directive 67/548/EEC on classification, packaging and labelling of dangerous substances and its amendments and adaptations in the European Union contains a list of substances classified by the EU. Substances not in this annex I should be classified on the basis of their intrinsic properties according to the criteria in the Directive by the person responsible for the marketing of the substance.

3: Composition/Information on Ingredients

Mixture: The material is formed by the action of sulphuric acids on aluminium and iron compounds.

Ingredient Name	CAS Number	%	EC Number	Classification	Risk Phrases
Aluminium Sulfate	10043-01-3	11 - 22.0	233-135-0	Xi	R36/38
Ferric Sulfate	10028-22-5	5.5 - 11.0	233-072-9	C	
Water	7732-18-5	72.5	231-791-2	Not classified	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in section 8.

4: First Aid Measures

Inhalation:	Remove to fresh air and loosen clothing. Seek medical attention if symptoms are severe.
Eyes:	Wash out thoroughly with water or saline solution for a minimum of 15 minutes; seek medical attention.
Skin:	Remove contaminated clothing, wash skin thoroughly with plenty of water for minimum 15 minutes. In severe cases seek medical attention.
Ingestion:	If confined to the mouth area give large quantities of water as a mouthwash, ensure the water is not swallowed. If substance has been swallowed, give 250ml of water to dilute in stomach. Do not induce vomiting. In severe cases seek medical attention.

5: Fire-Fighting Measures

Use full acid-resistant protective clothing.
Material is not combustible, but may release toxic vapours (oxides of sulphur) when heated above 200°C. If fumes are present, use an approved full-face-respirator with acid cartridge.
Use extinguishing media appropriate to the surrounding fire conditions.
Use water to keep containers cool. Do not release runoff to sewers or waterways.

6: Accidental, Release Measures

Wear appropriate protective clothing.
Do not allow runoff to enter sewers or waterways.
Small spills of liquid, neutralise with soda ash or lime, absorb liquid with sand.
Large spills of liquid, contain, then neutralise with caustic soda solution, and dispose in accordance with local regulations. Alumina sludge formed can be disposed of as a neutral waste.

7: Handling and Storage

Transport:	Delivered in 20/24 tonne, rubber lined, stainless-steel tankers, or plastic IBCs.
Storage:	Store in vessels suitable for solutions of low pH such as rubber-lined stainless steel, plastic, or glass reinforced plastic.
Handling:	Handle with care as an acid. Avoid contact with skin and eyes. Wear appropriate acid-resistant protective clothing.

8: Exposure Controls/Personal Protection

EH40/2005 listing under
Soluble aluminium salts : WEL 8 hour exposure 2 mg/m³.
Soluble iron salts : WEL 8 hour exposure 1 mg/m³.
Personal protective measures as appropriate to quantity used.
Respiratory: N/A.
Hand Protection: Rubber or PVC gloves.
Eye protection: Goggles or face shield affording complete eye protection.
Other measures: Plastic apron, sleeves, boots – if handling large quantities

9: Physical and Chemical Properties

General information	
Appearance	Liquid
Colour	Yellow to brown
Odour	Odourless
Molecular Formula	$x\text{Al}_2(\text{SO}_4)_3 \cdot (1-x)\text{Fe}_2(\text{SO}_4)_3 \cdot n\text{H}_2\text{O}$ where n is variable and x varies from 0,70 to 0,95..
Important health, safety and environmental information	
pH	0.5 – 2.5
Boiling point	105°C
Crystallisation point	-13 °C for composition containing 36 g/kg of Al and 15 g/kg of Fe.
Vapour pressure @ 20 °C	Not known
Density g/cm ³	1.35 (20 °C)
Solubility	Miscible in water. Very dilute solutions hydrolyze and form a precipitate of aluminium hydroxide and iron hydroxide.
Viscosity (mPa.s)	29 (10 °C)

10: Stability and Reactivity

Solution is acidic and may react with metal to liberate flammable hydrogen gas. No decomposition if used according to specification. Dangerous reactions with bases i.e. chlorites, hypochlorites, sulphites, cyanides and sulphides. Avoid contact with most common metals (aluminium, copper, zinc and their alloys). Can liberate toxic and corrosive fumes of SO₂ and SO₃ under extreme conditions when boiled to dryness or heated above 600°C.

11: Toxicological Information

Potential acute health effects	
Ingestion	Harmful if swallowed. Ingestion may result in damage to mucous membranes, nausea, vomiting, sore throat, abdominal pain and diarrhoea.
Skin contact	May cause burns
Eye contact	May cause corneal damage.

12: Ecological Information

Aluminium Iron(III) Sulfate is acidic, and so will cause damage to flora and fauna. The material should not be allowed to spill into controlled waters in large amounts, as sufficient quantities will affect aquatic life forms. In such cases the Environment Protection Agency or Local Authority should be contacted. Once diluted and neutralised no lasting effects will occur. Material is not bio accumulative.

13: Disposal Considerations

Do not dispose directly into rivers or drains. Small spills may be neutralised with sodium carbonate, lime, or calcium carbonate, and flushed to sewer. Large amounts of Aluminium Iron(III) Sulfate should be contained, and then be neutralised with a weak alkali solution. The resulting suspension (mainly aluminium and iron hydroxide) may be regarded as neutral waste and disposal should be in accordance with local or state or national legislation.

14: Transport Information

Aluminium Iron(III) sulfate is not listed under a UN number.
Aluminium Iron(III) sulfate is not classified as a dangerous product for road, rail, sea and air transportation.

15: Regulatory Information

Aluminium Iron(III) Sulfate Solution is classed as **Irritant** for supply, and packaging will carry the following information:

EU Regulations:

Hazard Symbol or symbols:	Xi Irritant
Risk Phrase :	R 36 : Irritating to eyes.
Safety Phrases:	S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37 : Wear suitable gloves.

Contains EINECS number:	Al ₂ (SO ₄) ₃ : 233-135-0; Fe ₂ (SO ₄) ₃ : 233-072-9.
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16: Other Information

References: Aluminium Iron(III) Sulfate solutions are used as chemicals for the treatment of drinking water, as approved by the European Committee for Standardisation under EN 887:2005. The Transport and Regulatory Information given are in accordance with EN 887:2005.

History: This data sheet was prepared in accordance with EC Regulation No. 1907/2006 concerning REACH.
This version replaces Version 4, Jan 2009.

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Revision: 5.

Notice to reader

To the best of our knowledge, the information provided in this Safety Data Sheet is accurate as at the date of its issue. The information it contains is being given for safety guidance purposes and relates only to the specific material and uses described in it. This information does not necessarily apply to that material when combined with other material(s) or when used otherwise than as described herein. Final determination of the suitability of any material is the sole responsibility of the user. All materials may represent unknown hazards and should be used with caution. Chemifloc Ltd disclaims any liability for loss or damage resulting from the use of any data, information or recommendations set out in this Safety Data Sheet.