

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

Identification of the Product

Product Name: Aluminium sulfate 16-hydrate

Alternate Name(s): Alum, Non-Ferric Alum

Use of the Product/Preparation

Pharmaceutical production, water-treatment, laboratory analysis

Details of the supplier of the safety data sheet

PHINE KEMIKALS INDIA

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Emergency telephone number

Emergency number : + 919023930031 (24 hrs)

Classification according to Regulation (EC) No. 1272/2008 [CLP]

SECTION 2: Composition/information on ingredients

CAS No:16828-11-8

M:630.39 g/mol

EC No.:233-135-0

Formula Hill:Al₂O₁₂S₃.16H₂O

Chemical Formula:Al₂(SO₄)₃.16H₂O

SECTION 3: Hazards Identification

Non-hazardous product as specified in Directive 67/548/EEC

SECTION 4: First aid measures

After inhalation: Fresh air.

After skin contact: Wash off with plenty of water. Remove contaminated clothing.

After eye contact: Rinse out with plenty of water with the eyelid held wide open. Call in ophtalmologist if necessary.

After swallowing: Immediately make victim drink plenty of water. Induce vomiting. Call in physician

SECTION 5: Firefighting measures

Suitable extinguishing media:Water spray, Dry chemical, CO₂ or Foam type. Select in adoption to materials stored in

the immediate neighborhood.

Special risks: Non-combustible. The following may develop in the event of fire: sulfur oxides.

Special protective equipment for firefighting: Do not stay in dangerous zones without self-contained breathing apparatus.

Other information: Contain escaping vapors with water. Prevent fire-fighting water from entering surface water or ground water.

SECTION 6: Accidental release measures

- Person-related precautionary measures:
 - Avoid generation of dust:
 - Do not inhale dusts.
 - Ensure supply of fresh air in enclosed rooms.
- Environmental-protection measures:
 - Do not allow to enter sewerage system.
- Procedures for cleaning / absorption:
 - Take up dry. Forward for disposal. Clean up affected area.

SECTION 7: Handling and storage

Handling: No further requirements.

Storage: Tightly closed. Dry Storage. No Restrictions

SECTION 8: Exposure controls/personal protection



Personal protective equipment:

Protective clothing should be selected specifically for the working place, depending on the concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

- Respiratory protection: required when dusts are generated.
- Eye protection: required
- Hand protection: In full contact & splash contact:
- Glove material: nitrile rubber
- Layer thickness: 0.11 mm

Industrial hygiene: Immediately change contaminated clothing. Apply skin-protective barrier cream. Wash hands and face after working with substance.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Form: Solid

Color: White

Odor: Odorless

pH value: 2.5-4.0
at 20 g/l H₂O (20°C)

Melting point: 90 °C (release of water of crystallization)

Boiling point: not applicable

Ignition temperature: not combustible

Flash point: not flammable

Explosion limits: not applicable

Density: 1.72 g/cm³

Bulk density: 820 kg/m³

Solubility in water: 364 g/l

Thermal decomposition: > 87 °C (release of water of crystallization)
> 770 °C (anhydrous substance)

SECTION 10: Stability and reactivity

Conditions to be avoided: Strong heating

Substances to be avoided: None

Hazardous decomposition products: In the event of fire: See chapter 5.

Further information: Releases water of crystallization when heated.

SECTION 11: Toxicological information

Acute toxicity: LD₅₀ (Oral, rat): > 9000 mg/kg

Further toxicological information

- After skin contact: Slight irritations.
- After eye contact: Slight irritations.
- After swallowing: Irritation in the mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
- Special properties/effects: Astringent

Other notes: The following applies to aluminum compounds in general:

After swallowing: only slightly absorbable via the gastrointestinal tract. Serious disorders in man (from about 4000 mg aluminum up): phosphate metabolism, calcium metabolism.

Further data: Further hazardous properties cannot be excluded.

The product should be handled with the care usual when dealing with chemicals

SECTION 12: Ecological information

Biologic degradation:

Methods for the determination of biodegradability are not applicable to inorganic substances.

Ecotoxic effects: Quantitative data on the ecological effect of this product is not available.

Further ecologic data:

- The following applies to aluminum compounds in general
 - For acidic aluminum compounds: Biological effects: toxic for water organisms. Fish: toxic as from 0.55 mg/l ; in very soft water toxic as from 0.1 mg/l ; crustaceans: D. magna toxic as from 136 mg/l ; algae: Sc. quadric Uda toxic as from 1.5 mg/l (all values referring to dissolved Al). In the case of

alkaline aluminum compounds, flocculation may cause mechanical damage in aquatic organisms.

- The following applies to sulfate in general:
 - Biological effects: fish: toxic as from 7 g/l ; bacteria: toxic as from 2.5 g/l .
- No ecological problems are to be expected when the product is handled and used with due care and attention.

SECTION 13: Disposal considerations

Product: Chemicals must be disposed of in compliance with the respective national regulations.

Packaging: Product packaging must be disposed of in compliance with the respective national regulations or must be passed to a packaging return system, if available.

SECTION 14: Transport information

Not Subject to transport regulations (ADR/RID, AND, IATA, IMDG)

SECTION 15: Regulatory information

Labeling according to EC Directives:

Symbol:	--
R-phrases:	--
S-phrases:	24/25 Avoid contact with skin and eyes

SECTION 16: Other information

Reasons for Alteration:

Not altered. Release 1.

Regional representation:

India: given in Chapter 1 (company identification)

Disclaimer:

This Safety Data Sheet (SDS) information is based on our current knowledge and is intended to describe the product for health, safety, and environmental purposes only. It should not be interpreted as a guarantee of any specific product property.