



SAFETY DATA SHEET **Poly Aluminium Chloride 10%**

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

Identification of the substance or preparation

Product Name: Poly aluminium chloride solution (10%) in water. Poly aluminium Chloride Hydroxide, Poly aluminium Chloride Hydroxide Sulfate, PAC, PACS

Chemical Name: Poly aluminium chloride hydroxide

Use of the preparation:

Used as a chemical for the treatment of drinking water, has received appropriate approval by the European Committee for Standardization. Also used in paper sizing.

Company/Undertaking identification

Supplier: Sulaksh Chemicals

Vadodara

Gujarat

2: Hazards Identification

Hazard Class: **C: Corrosive**

Risk Phrase: R34 – Causes burns

Material causes burns to eyes, skin and gastrointestinal tract. Effect is mild for 10%.

3: Composition/Information on Ingredients

The material is formed by the action of hydrochloric and sulphuric acids on aluminium trihydroxide

Alumina % Wt. : 8±1

Chlorides % Wt : 21±1



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 vapors (hydrogen chloride, 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, neutralize with soda ash or lime, absorb liquid with sand.

Large spills of liquid, contain, then neutralize 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.
Stainless steel vessels are not recommended.

Handling: Handle with care as an acid.

Avoid contact with skin and eyes.

Wear appropriate acid-resistant protective clothing.



8: Exposure Controls/Personal Protection

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 pale liquid

Colour

Pale Yellow

Odour

Odourless

Molecular Formula

$\text{Al}(\text{OH})_a \text{Cl}_b (\text{SO}_4)_c$ with $(a+b+2c) = 3$, and $a > 1.05$.

Important health, safety and environmental information

pH

1.5 – 2.0

Vapour Pressure:

30mm Hg at 0° C.

Freezing point

-15° C

Density g/cm³ at 20°C.

Solubility

Miscible in water. Diluted solutions hydrolyse to precipitate $\text{Al}(\text{OH})_3$.

10: Stability and Reactivity

Solution is acidic and may react with metal to liberate flammable hydrogen gas.

Reacts aggressively with some metal surfaces (e.g. galvanized metal, aluminum, copper, zinc, and alloys of these metals).

Incompatible with other poly aluminium salts. Special care has to be taken regarding mixing with products previously used in order to avoid gel formation or precipitation.

Avoid contact with chlorites, hypochlorites, and sulphites.

Incompatible with iron salts and aluminium sulfate

11: Toxicological Information

Skin Contact: May cause burns - mild burns with 10%.

Eye Contact: May cause corneal damage.

Ingestion: Harmful if swallowed. Ingestion may result in damage to mucous membranes, nausea, vomiting, sore throat, abdominal pain and diarrhoea.

227, V.I.P. View Complex, V.I.P. Road, Karelbaug, Vadodara-390018, Gujarat.

Telefax-(0265)3021736. Email:-info@sulaksh-chemicals.com

Website:-WWW.SULAKSH-CHEMICALS.COM



12: Ecological Information

Polyaluminium Chloride 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 neutralized 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 neutralized with sodium carbonate, lime, or calcium carbonate, and flushed to sewer.

Large amounts of Polyaluminium Chloride should be contained, and then be neutralized with a weak alkali solution. The resulting suspension (mainly alumina) may be regarded as neutral waste and disposal should be in accordance with local or state or national legislation.

14: Transport Information

Proper Shipping Name: CORROSIVE LIQUID, N.O.S. (Poly aluminium Chloride Solution)

UN Number: 1760

RID/ADR: Class 8

Hazard ID Number: 80

Classification Code: C9

Packing Group: PG III

15: Regulatory Information

Poly aluminium Chloride Solution is classed as **Corrosive** for supply, and packaging will carry the following information:

Risk phrase: R34: Causes burns.

Safety phrases: S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 27: Take off immediately all contaminated clothing.

S 37/39: Wear suitable gloves and eye/face protection.



16: Other Information

References: Poly aluminium chloride solutions are used as chemicals for the treatment of drinking water, as approved by the European Committee for Standardization under EN 883:2004. The Transport and Regulatory Information given are in accordance with EN 883:2004.

Notes on storage conditions and product stability

Poly aluminium chloride solutions are stable indefinitely when stored under benign conditions (sealed vessel, constant temperature). However, some users may experience product instability, which can arise from two potential problems:

- 1) The product is designed to break down on contact with water, to allow water treatment to occur. As a result, water vapour condensing on inside tank surfaces may lead to colourless crystals forming when the water drops back into the bulk liquid. These crystals can only be dissolved using hot water. Condensation should thus be minimized by tank design and location. If possible, avoid tanks that are dark in colour, in direct sunlight, and off the ground, as these factors will lead to large day/night temperature fluctuations.
- 2) Long-term storage in open/vented vessels may result in evaporation of water, leading to over concentration of the 10% PAC, and formation of a very fine, cream-coloured deposit. This deposit is easily dissolved in cold water.

Sulaksh Chemicals thus recommends that tanks be designed to minimize temperature effects, have a top hatch to allow routine quarterly inspection for any deposits, and have a bottom drain in case the need for washout occurs.

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.