



ADITYA BIRLA CHEMICALS (INDIA) LIMITED

(RENUKOOT CHEMICAL WORKS DIVISION)
P.O. RENUKOOT - 231217, SONEBHADRA, (U.P)

MATERIAL SAFETY DATA SHEET

Poly Aluminium Chloride

1. IDENTIFICATION

Trade Marks and Synonyms	KANPAC 18P / KANPAC-18W KANPAC 10 / KANPAC-10 MB / KANPAC 10 HB
Chemical Name	Polyaluminium Chloride, Polyaluminium hydrochloride, Polyaluminium hydrochloride sulphate, Polyaluminium Chloride Hydroxide, Aluminum chlorohydrate sulphate
Physical Form	Amber to light pale yellow, almost clear liquid
Molecular Formula	$Al_n(OH)_mCl_{3n-m}$, $(Al(OH)_xCl_y(SO_4)_z)_n$ here $x > 1.05$, $x+y+2z=3$ & $n=15$
Manufacturer Name & Address	Aditya Birla Chemicals (India) Ltd, Dist. Sonebhadra, Renukoot (UP) 231217, INDIA
Responsible Person	Telephone: 91-5446-252088 e-mail: abcil.renukoot@adityabirla.com Safety Officer; Aditya Birla Chemicals (India) Ltd, Renukoot Dist Sonebhadra (UP) 231217, INDIA

2. INFORMATION OF MAJOR INGREDIENTS

Chemical Name	Polyaluminium chloride liquid
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CAS No	1327-41-9 / 39290-78-3
Formula	$Al_n(OH)_mCl_{3n-m} / (Al(OH)_xCl_y(SO_4)_z)_n$
Aluminum Content (%)	Min. 5.0 to 17 (as Al_2O_3

3. HAZARD IDENTIFICATION

Main Risk Ingestion	Very astringent to mouth, nose & throat
Contact with eyes	Causes eye irritation
Safety Phrases	Keep out of reach of children. In case of contact with eye, wash immediately with plenty of water for 15-20 minutes. Seek medical aid. Remove contaminated clothes & shoes. Wash affected area with plenty of water. If inhaled, remove the victim to fresh air area & support respiration. Seek Medical Aid immediately for all types of exposure.

4. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odour	Clear or slightly opalescent, amber to light pale yellow coloured liquid with little or no odour
pH (5% aqueous solution)	3.0-4.0
Specific Gravity	1.18 – 1.40
Boiling Point	Approx. 120°C
Flash Point	Not pertinent
Melting Point	About -12°C
Flammable Limit	Non-flammable
Vapour Pressure (mm Hg)	Not applicable
Solubility in Water	100 % soluble
Solubility in Organic Solvents	Not soluble
Oxidizing /Explosive Properties	None



5. STABILITY AND REACTIVITY

Stability	As supplied it is stable at normal temperature & pressure.
Conditions to avoid	Avoid contact with bases, chlorides, sulphites, hypochlorites and temperatures above 40°C
Material to avoid	Long term contact with aluminum & alloys, zinc & alloys, carbon & steel
Reactivity	
Air	No reaction
Water	Coagulates substances suspended or dispersed in water to settle quickly to form a filterable sludge.
Acids	With mineral acids bulk precipitation of solid occurs
Alkalis	Bulk precipitation with evolution of heat occurs
Hazardous Decomposition Products	Hydrogen chloride

6. TOXICITY DATA

(Routes of Entry)

In contact with skin	Irritant-after prolonged contact with skin produces sores and possible dermatitis.
In contact with eyes	Irritates immediately and could cause severe damage.
Inhalation	Product does not fumes
Ingestion	Very astringent to mouth, nose & throat
Acute Toxicity	LD ₅₀ >2000 mg/Kg
Chronic Toxicity	Not available



7. **FIRST AID MEASURES**

Skin Contact	Remove contaminated clothing and wash affected area with sufficient quantity of water for 15-20 minutes. Seek medical aid
Eye Contact	Immediately irrigate with water for at least 15 minutes. Seek medical assistance immediately
Inhalation	Remove from contaminated area. Obtain medical attention.
Ingestion	Provided patient is conscious, wash out with water. Do not induce vomiting and give 5% sodium bicarbonate solution followed by a demulcent such as milk. If in doubt, seek medical attention.

8. **FIRE AND EXPLOSION HAZARD DATA**

Fire Extinguishing Data	Poly Aluminium chloride is non-inflammable. On burning will emit fumes. Water spray, foam, carbon dioxide or dry powder may be used. Keep containers cool with copious amounts of water.
Would any material saturated with this product be subject to spontaneous combustion?	No
Fire Fighting Protective equipment	Wear full protective clothing, goggles, masks
Unusual Fire and explosive hazards	In contact with metals, poly Aluminium chloride may liberate the flammable gas hydrogen

9. **PERSONAL PROTECTION**

General Precautions	Eye and skin protection should be used.
Carcinogenic Toxicity	No evidence
Mutagenic Toxicity	No evidence
Throatogenic Toxicity	TDL _o approx 13 g/kg
Respiratory Protection	Not normally required
Protective Clothing	Protective overall, rubber gloves, hard hat, acid resistant boots.
Eye Protection	Goggles or full face mask



10. HANDLING AND STORAGE

Handling	Avoid contact with skin, eyes, and clothing. Avoid breathing dust or mist. Keep away from metals, organic materials, nitrates, chlorates and carbides. It is compatible with lead, rubber, glass, fiber, glass, HDPE, PVC& FRP.
Storage	Bulk quantities should be stored in ebonite coated, steel, rubber-lined mild steel, FRP or plastic tanks. For small packages, polyethylene or double skinned polyethylene containers are acceptable. Store indoors away from direct heat or sunlight. Avoid extreme temperatures. PAC may become unstable when stored for long time at temperatures higher than 40°C. PAC tends to hydrolyze to a white turbid solution and loses effectiveness when it is kept long as a diluted solution of less than approximately 3% (as Al ₂ O ₃). The storage area should have a non-combustible and corrosion resistant floor.

11. SPILLAGE/ACCIDENTAL RELEASE

Spillage	For very small leaks wash away with large quantities of water. For other leaks collect liquid either by pumping into an emergency tank or by absorption in dry sand.
Personal Precautions	Wear full protective clothing.
Environmental Precautions	Where a spillage or contaminated washing causes contamination of water courses, drains or vegetation, inform relevant authorities.

12. WASTE DISPOSAL

Waste Disposal	Neutralize with lime and landfill in accordance with Local Regulations.
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13. ENVIRONMENTAL INFORMATION

Environmental Fate and Distribution	High tonnage material produced in wholly contained systems.
Persistence and Degradation	The substance is soluble in water. Unlikely to cause harmful effects, remains as chloride indefinitely.
Toxicity and effect on effluent system	Large discharges may contribute to the acidification of effluent treatment system and will injure organisms. The product is a primary coagulant and may cause solid settlement in treatment systems.
Ecological Information	The product tested in various concentrations is found to be entirely harmless to aquatic life up to concentration of 200 mg/litre expressed as Al ₂ O ₃ (corresponding to 1.4 g/l of PAC 10%)



14. REGULATORY INFORMATION

Danger Symbol	Xi
Risk Phrases	R36: Irritant for eyes. R38: Irritant for skin
Safety Phrases	S2: Keep locked up and out of the reach of children. S7/8/9: Keep container tightly closed , dry and in a well ventilated area. S24/25: Avoid contact with skin and eyes. S26: In case of contact with eyes , rinse immediately with plenty of water and seek medical advice. S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

15. TRANSPORT INFORMATION

UN No. & Symbols	1760 Class 8
Packing Group	I
Hazard Class	8
ADR/RID Class	Low Hazard
ADR / RID Item	Class 8

16. OTHER INFORMATION

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.

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