

Poly Aluminium Chloride

CAS Not available · Aln · 10% & 17% liquid · 30% powder

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1. Product identity

Product name	Poly Aluminium Chloride
Synonyms	PAC chemical, polyaluminium chloride, PAC 10%, PAC 17%
C.A.S. number	No single true CAS - PAC is a polymeric inorganic mixture (UVCB), and the CAS quoted is a representative one that varies between suppliers. The ones actually in commercial use are: 1327-41-9, aluminium chloride basic, EC 215-477-2 (used by Kemira and by most Indian producers); 39290-78-3, aluminium chloride hydroxide, EC 254-400-7 (used by several UK/EU suppliers); and 101707-17-9. Declare the product as a mixture and label the CAS explicitly as representative - do not present any of these as the definitive CAS.
Molecular formula	$\text{Al}_n(\text{OH})_m\text{Cl}_{(3n-m)}$, commonly written $[\text{Al}_2(\text{OH})_n\text{Cl}_{(6-n)}]_m$ - not a discrete molecule
Molecular weight	Not available (polymeric mixture - grades are specified by % Al_2O_3 and % basicity, not by molecular weight)
Grade supplied against	10% & 17% liquid · 30% powder
Appearance	Liquid grades (10% and 17%): clear to slightly hazy straw, light-yellow or amber liquid with a faint acidic odour. Powder grade (about 29-32% Al_2O_3): yellow to pale brown free-flowing spray-dried powder or granule.
Product group	Water & Effluent Treatment
HSN code	2827 32 00
Country of origin	As stated on the producer's documents for the lot supplied; confirmed at offer stage
Packing	Road tanker · 25 kg bag
Storage	Store between 0 degC and below 30 degC in closed original containers, in a bunded, acid-resistant area. Suitable materials: PE, PP, PVC, GRP/fibreglass-reinforced polyester, epoxy-coated concrete, titanium, and acid-proof or rubber-lined steel. Never galvanised or mild steel, and never aluminium. Keep segregated from hypochlorites, chlorites, sulphites and alkalis - do not share a bund or a delivery line with sodium hypochlorite. The liquid becomes unstable above about 40 degC and has a limited shelf life (Kemira states 8 months). Keep the powder grade dry - it is hygroscopic and cakes.

2. Analytical specification

S. No.	Test parameter	Specification	Method
1	Description	Liquid grades (10% and 17%): clear to slightly hazy straw, light-yellow or amber liquid with a faint acidic odour. Powder grade (about 29-32% Al_2O_3): yellow to pale brown free-flowing spray-dried powder or granule.	Visual
2	Identification	Conforms to the substance supplied	Instrumental or chemical test, per method agreed

S. No.	Test parameter	Specification	Method
3	Assay / grade	10% & 17% liquid · 30% powder	Titrimetry or instrumental, per method agreed
4	Physical state	Liquid (the 10% and 17% grades) or solid powder (the 30% grade)	Visual
5	Solubility in water	Completely soluble/miscible in water. Important: solutions diluted below about 3% Al ₂ O ₃ hydrolyse and are not storage-stable, so prepare dilute dosing solutions fresh.	Per the test method agreed
6	pH	Strongly acidic, and the number is meaningless without the dilution. 17-18% liquid: about 1.0 on the undiluted product (Kemira PAX-18), and 3.5-4.5 measured on a 5% solution at 20 degC (Koruma PAC 17). 10% liquid: 1.8-2.5 on the undiluted product. Powder at 29-32% Al ₂ O ₃ : 3.5-5.0 measured on a 1% aqueous solution. Always print the dilution alongside the figure.	Potentiometry on an aqueous suspension
7	Relative density	10% liquid: about 1.21 g/cm ³ at 20 degC. 17-18% liquid: 1.34-1.40 g/cm ³ at 20 degC (Kemira PAX-18), 1.37 +/- 0.02 g/cm ³ (Koruma PAC 17). Powder bulk density: Not available.	Pyknometry or gas displacement
8	Melting / freezing point	Liquid grades: freezing/crystallisation point about -10 degC for the 17-18% grade (Kemira PAX-18) and below -25 degC for the 10% grade. Powder grade: Not available.	Thermal analysis
9	Boiling point	About 105-115 degC for the 17-18% liquid grade (Kemira PAX-18). Thermal decomposition above about 200 degC. Not applicable to the powder.	Distillation range
10	Flash point	Not flammable (inorganic; not applicable)	Not applicable — the substance is not combustible
11	Additional parameters	To the specification agreed before order	As agreed

3. Transport classification

Not available - genuinely grade dependent, and must be taken from the classification of the specific product. See notes for what the producer SDS actually say. · Class Not available - Class 8 where the grade meets the corrosive criteria (see notes); not regulated where it does not. · Packing group Not available - Packing Group III where the product is assigned as a Class 8 corrosive liquid (see notes).

Proper shipping name: Not available - see notes. PAC has no dedicated entry in the UN dangerous goods list, so any shipping name is an n.o.s. or analogous entry chosen on the basis of the product's own classification.

What this document is. This is a product specification sheet. It states the grade this material is supplied against, its packing and its identity. **It is not a certificate of analysis, it carries no test results, and it certifies no batch.** Tested values for the consignment actually loaded appear on the batch certificate of analysis issued against that batch, which travels with the despatch documents. Identity and physical data are drawn from PubChem, the ECHA CLP inventory and ILO safety cards; the producer's documents for the grade quoted govern. Velora Chemicals Private Limited is a bulk supplier and trader, not a manufacturer.