



Aluminium Chlorohydrate (ACH)

PRODUCTION PLANTS

Engineering at service
of sustainability



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KERN SD

develops on-site aluminium chlorohydrate production facilities tailored to meet customers' technical and economic needs.

KERN SD plants are fully customizable in terms of production.

- KERN SD has an **innovative technology** for the production of **ACH**, by batch reaction of aluminium with an aqueous solution of hydrochloric acid - *this reaction takes place in a vitrified reactor; the discharged product is filtered separating unreacted alumina and insolubles; finally the clarified product is transferred to tanks where it is stored to the specification required by the customer.*
- Plants designed and developed by KERN SD use safe, environmentally friendly and highly competitive technology due to their low investment and low operating costs (high electrical efficiency and degree of automation).
- KERN SD technology complies with the **EU Best Available Technologies (BAT) Directives** for the production of chlor-alkali (Directive 2010/75/EU).

TECHNICAL SPECIFICATIONS OF THE PRODUCT $(Al_n(OH)_mCl_{(3n-m)} \cdot H_2O)$	
Appearance	Light or dark amber
Melting point	-15° C
Boiling point	100 - 110 °C
Density	1,33 -1,35 g/cm³
Molar Mass	210,48 g/mol
Water solubility	Easy



Aluminium Chlorohydrate (ACH) Production Plants

PLANT FEATURES

Output	Tailored to customer needs
Flexibility	50-100%
Concentration	23-24%
Materials	Built with high quality materials
Monitoring	Fully automated and monitored plants

- **ON-SITE PRODUCTION**
- **FIXED PLANTS**
- **MODULAR AND SCALABLE**
- **AUTOMATIC CONTROL**
- **SAFE OPERATION**
- **ECONOMIC SAVINGS** (low operating and maintenance costs)
- **HIGH ENERGY EFFICIENCY**
- **SIGNIFICANT REDUCTION** of associated storage, handling and road transport risks
- **HIGH PURITY PRODUCT**
- **NO ENVIRONMENTAL IMPACT**

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SOME APPLICATIONS

OF ALUMINIUM CHLOROHYDRATE

Aluminium Chlorohydrate is used as a coagulant - flocculant in clarification for high turbidity conditions without lowering the pH of the water :

- Paper industry for the gluing process
- Swimming pools
- Oil industry
- Industrial waste water treatment