



## Inorganic Polymers & Coagulants

Our line of inorganic polymers and coagulants for water and wastewater treatment and the pulp and paper industry includes Aluminum-based Products, Enhanced Coagulants, Ferric Sulfate, etc. Our enhanced coagulant product line is one of the broadest in the United States. It encompasses over 25 liquid products, containing both Polyaluminum Hydroxychloride alone and in combination with organic polymers. Different coagulant grades work under different conditions to meet a range of treatment goals, from removing turbidity, color and TOC; to extending filter runs and reducing backwash waste; to decreasing sludge volumes and the use of pH adjustment chemicals. Our coagulants perform particularly well where conventional systems fail (e.g., with cold or low-alkalinity source waters) and often allow plants to reduce cost and extend operating range significantly.

### ***Product Forms***

Aluminum Sulfate, Formulated Alums, Aluminum Chloride, Polyaluminum Chlorides, Polyaluminum Hydroxychlorosulfates, Ferric Sulfate Solutions, Sodium Aluminates

### ***Principal Uses***

- Ø Municipal and Industrial Wastewater Treatment
- Ø Coagulation and Clarification
- Ø Wastewater Treatment, Phosphorus Inactivation, TOC and TSS Reduction, Lower Turbidities, Color Removal
- Ø Filtration Systems, Sludge Conditioning, Dewatering Aid, Dissolved Air Flotation
- Ø Charge Modification
- Ø Oil/Water Separation

### ***Advantages***

- Cold Water Applications
- May be Formulated to include Organic Polymers and/or High Acid Content
- Improve production rates and overall treatment costs
- Reduce sludge handling, transportation and disposal costs
- May lower or eliminate the need for alkali and flocculant aids
- Perform well over a wide pH range
- Extends filter runs and water production capacity.
- Products are NSF approved and US EPA and MDEQ Approved or Approvable

### ***Preparation***

Prior to use, agitate thoroughly to ensure uniformity. Recommended working solution is 0.1-1.0% for solid grade polymers and 0.25-2.5% for emulsion and liquid grades, however, stock solutions can be prepared up to 2% via an automated make down unit or on a batch basis. Solutions should be aged 25 minutes for maximum effectiveness. Avoid centrifugal pumps for polymer transfer.

### ***Handling & Storage***

Recommended materials of construction include stainless steel, fiber glass, plastic and glass or epoxy-lined vessels. Do not use iron, copper or aluminum. The shelf life of these products is 6 months (liquids/emulsions) to 2 years (dry bags) when stored at temperatures between 5-30°C. For best results avoid freezing.

***Spilled polymer is very slippery and should be absorbed onto an inert material and collected prior to thoroughly flushing with water.***

### ***Shipping***

Cationic polymers are shipped in 450 lb. Drums (Net weight), 2,300 lb. Totes, and Bulk quantities.

### ***Government Approval/Regulatory Information***

Maximum allowable dose for potable water treatment is 250 mg/L for most products. For Chemical Inventory regulatory control listing information for the U.S., see the MSDS.

WaterSolve Products are currently approved for use in accordance with National Sanitary Foundation (NSF) Standards. Go to [www.NSF.org](http://www.NSF.org) or check with your state DEQ for approval procedures.

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