

KlarAid* coagulants

highly charged inorganic, organic and custom blended coagulants for clarification of industrial water and wastewater

- Easy to feed and ready to use solutions
- Wide range of molecular weights, chemistries and charges densities
- Promotes superior water clarity in difficult to treat water and wastewater
- Highly efficient emulsion breakers for oil-in-water emulsions

description and use

KlarAid products are ready to use water-soluble coagulants, ranging from polymeric inorganic and organic coagulants to blended formulations and single container product blends. They are designed to function in a variety of industrial water and wastewater treatment applications including use as a primary coagulant for removal of colloidal turbidity and color for raw water clarification, as a demulsifier to facilitate liquid solids separation in dissolved gas flotation units used for primary wastewater treatment, and settling and filter aids used separately or in conjunction with organic flocculants.

products and services offered

The KlarAid product line encompasses a comprehensive portfolio of chemistries ranging from amphoteric tannins and starches to relatively low to high cationic charge densities. The wide portfolio of products allows SUEZ to provide products for a wide variety of raw and wastewater applications. These products are provided as part of a comprehensive treatment program by highly technical field personnel who evaluate each customer's specific application needs and treatment objectives, before selecting the

appropriate product for that situation. On-site testing is performed to ensure that the optimum overall solution for the customer is chosen based upon the customer's objectives.

application and treatment

Proper application and treatment levels depend on many factors and coagulant applications are specifically designed for each application and for each individual facility's needs. KlarAid products can be applied neat (undiluted) as received or diluted to a convenient strength and may be fed by a pump or by gravity flow to a point where there is good mixing. Storage, Handling and Safety instructions are provided with every product in the form of written recommendations and detailed MSDS.

solution benefits

SUEZ's KlarAid products, used together with an in-depth system audit, and engineered application and operational recommendations, will provide one or more of the following benefits:

- Cost-effective clarification and flotation operations for superior effluent quality
- SUEZ's technical expertise in improving operation of process unit
- SUEZ's assistance in monitoring performance of process unit
- Increases the capture efficiency of individual unit processes
- Reduces loadings on downstream treatment processes

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- Improves unit process effluent quality
- Reduces turbidity in treated effluent
- Ability to adapt to changing water and wastewater quality, due to access to wide portfolio of SUEZ products. SUEZ on-site

service will provide product selection and operational advice as needed.

- Delivery and Billing options to meet almost any customer need.

KlarAid technology program benefits comparison

Program Name	KlarAid IC Series	KlarAid CDP Series	KlarAid PC Series
Description	High charge, low molecular weight, Inorganic Coagulants (IC)	High charge, low molecular weight, cationic coagulant Custom Designed Polymer (CDP) blends	High charge, low to moderate molecular weight, cationic Polymeric Coagulants (PC)
Key Benefits	<p>Cost effective, liquid products, easy to feed neat and in automated feed systems</p> <p>Self-precipitating, form their own floc in low solids waters</p> <p>Give excellent improvement in water clarity</p> <p>Performs in many types of industrial waste streams and influent clarification systems</p> <p>Excellent for automated feed systems</p>	<p>Cost effective, easy to feed neat</p> <p>Forms floc quickly, some self-precipitation</p> <p>Work over a wider pH range, less pH adjustment is generally required</p> <p>Performs in many types of industrial wastes and in influent water treatment systems</p> <p>Excellent for automated feed</p> <p>Produces less sludge than traditional treatment programs with inorganic coagulants and lime</p>	<p>Perform in a wide variety of industrial wastes and influent clarification</p> <p>Excellent for automated feed systems and neat feed</p> <p>Performs over a wide pH range</p> <p>Higher molecular weight products often work where inorganic coagulants wont and at lower feed rates</p> <p>Produces less sludge than traditional treatment programs with inorganic coagulants and lime</p>