



Anti-Scalants & Dispersants

Anti-scalants can inhibit inorganic scale formation (e.g., CaCO_3 , CaSO_4 , BaSO_4) especially at metal surfaces in industrial boilers, cooling towers, mining and mineral processing, and oil fields. Scale formation is inhibited by three mechanisms: 1) interference with the growth of scale crystals, 2) dispersion of particles or prevention of their agglomeration into larger adherent particles, and 3) chelation or complexation of inorganic ions.

Dispersants are used in many industrial products and processes that require solids be mixed in a finely divided state within a liquid medium and remain stable for a period of time prior to and during their use. Our copolymers and polycarboxylates are a series of dispersants that provide stability to dispersions at low dosages. The properties of these polycarboxylates will allow them to adsorb efficiently onto a solid substrate and be maintained in a stable dispersion state through a complex and system-dependent mechanism involving electrostatic repulsion and/or steric hinderance.

Principal Uses

- Ø Anti-scalants for a number of inorganic scales in several environments
- Ø Dispersants (deflocculants) to reduce bulk viscosity of high solid slurries
- Ø Maintain stability of finely divided particle dispersions
- Ø Specialty additives in many detergent formulations
- Ø Wet grinding additives in ground CaCO_3 in Paper Coating and Latex Compounding
- Ø Superplasticizers/Retarders in concrete and gypsum cements for construction

Advantages

- High dispersion of insoluble salts and soil particles
- Soil releasing properties for anti-deposition onto fabrics
- High efficiency for binding calcium ions
- Stable under chlorine and alkaline conditions
- High temperature stability
- Low foaming properties
- Excellent compatibility with surfactants used in detergent & cleaning formulations
- Excellent processing and granulating aid to spray dry products

Industrial Applications

Clay Slurries (kaolin)	Titanium Dioxide	Calcium Carbonate
Pigment Suspensions	Paper Manufacture	Drilling Fluids in Oil & Gas
Ore-in-Water Slurries	Water-based Paints	High Performance Ceramics
Detergents & Cleaning Products	Boilers & Cooling Towers	

Government Approval/Regulatory Information

For Chemical Inventory regulatory control listing information for the U.S., see the MSDS.

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