

Polyfam[®] PR600

Preliminary Technical Data Sheet

Characteristics

Polyfam[®] PR600 is an aqueous dispersion of sulphonated acrylic acid copolymer.

Stabilization

Surfactants

Recommended Application Areas

General purpose antiscalant and dispersing agent

Specification

These technical data are determined for each batch before its release by our quality control laboratory.

	Unit	Value	Dev.
Solids content (2gr, 2h; 150 °C)	%	43 ±	1
Viscosity (ISO 2555) Brookfield-viscometer	mPa.s (cP)	215 ±	25
pH value (ISO 976)		4.5 ±	0.5

Additional Data

These data are solely to describe the product. They are not subject to constant monitoring or part of the specification.

	Unit	Value
Average Molecular Weight		Approx. 4500
Density (ISO 2811)	g/cm ³	Approx. 1.2

This information is based on our present state of knowledge and is intended to provide general notes on our products and their uses. It should not therefore be construed as guaranteeing specific properties of the products described or their suitability for a particular application.

Applications

Polyfam® PR600 is a low molecular weight sulphonated acrylic acid copolymer which has very good dispersing and scale inhibiting properties and can be used very effectively in boiler water treatment as an antiscalant. *Polyfam® PR600* can be used in various cooling circuits for inhibition of Ca salts including carbonates, sulphates, phosphates etc, as well as dispersing other insoluble impurities. *Polyfam® PR600* is a dispersing and disaggregating agent with a high anti-redepositioning effect.

Advantages of *Polyfam® PR600* are:

- Presence of sulphonated group leads to more stable dispersions in high temperature, high pressure and high alkalinity
- Superior phosphate inhibition
- The ability of being effectively used in zinc based systems
- Excellent iron tolerance; therefore, can effectively inhibit phosphates, carbonates sulphates even in the presence of iron
- Promoting toward corrosion inhibition performance of the formulation
- Providing constant and superior inhibition in a wide range of pH

For cooling tower application, the dosage level of *Polyfam® PR600* should be between 5-10 ppm on active polymer basis.

For boiler application, the dosage level of *Polyfam® PR600* should be between 10-15 ppm on active polymer basis.

Comparative test results

Calcium carbonate and Calcium Phosphate inhibition

Criteria	Calcium Carbonate test	Calcium Phosphate test
Conc. of Ca as CaCO ₃ (ppm)	1000	250
Conc. of PO ₄ (ppm)	-	6
pH	7.5-8	8-8.5
Temperature (°C)	55±1	70±1
Duration (hr)	24	18

performance	Conc. as supplied (ppm)	<i>Polyfam® PR600</i>	<i>Acumer™ 2000</i>
Calcium Carbonate test	5	52.23 %	50.81 %
	10	60.5 %	57.81 %
Calcium Phosphate test	10	94.25 %	96.55 %

Safety and handling

Polyfam® PR600 is generally safe but one should wear gloves and glasses to handle the product thereby avoiding contact with eyes and prolonged contact with skin.

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