



ZS INTERPOLYMER Waterbased Polymers

General Technology Overview

ZS INTERPOLYMER offers a range of waterbased acrylics and waxes based on proprietary technologies that can be used in multiple coatings applications. These polymers are used in multiple markets to give improved performance over traditional acrylic emulsions. Since these technologies are ZS INTERPOLYMER internally developed, we are able to tailor make solutions to meet our customers' requirements.

Below is an overview of each of our proprietary technologies:

Self-Crosslinking Technology combines two different crosslinking mechanisms on the same polymer backbone, which substantially increase the chemical resistance, stain resistance and water resistance of the cured polymer film. This technology was designed for the self-crosslinking mechanism to fully cure at room temperature, but maintain standard, long-term shelf stability.

Bimodal Technology based on a patented process that combines two different ionic structures in the same polymer network increasing the adhesion to multiple substrates, wood tannin blocking, stain blocking and dye blocking. This technology allows a formulator to take advantage of the benefits of a cationic acrylic without the traditional compatibility issues.

Shell-Core / Hybrid Technology based on a proprietary process combining different polymer types into the same polymer network to improve film formation and overall physical properties.

Inherently Dull Technology is based on a proprietary manufacturing process that creates an inherently dull acrylic polymer. This technology creates a film with low gloss, flexibility, and excellent stability. This technology also allows for excellent adhesion over multiple substrate types.

Opacifier Technology based on polystyrene for whiteness & brightness at low levels in household products. They can also be used to replace a percentage of titanium dioxide used in white paints, while maintaining the same coverage.

Examples of Technology

	pH	Solids (%)	MFFT (°C)	Technology	Comment
1693	7.5	42	15°C	Self-crosslinked	Excellent stain, chemical and water resistance
6145	7.5	40	< 10°C	Bimodal	Wood tannin, stain blocking and excellent adhesion
3215	7.5	44	20°C	Shell-Core	Excellent gloss & ink receptivity in OPV's
6701	7.5	45	0°C	Inherently Dull	Low gloss coatings & primers
5933	7.0	35	80°C	Opacifier	Whitening of cleaners & TiO2 reduction usage in paints

High Solids Technology creates a film with very high flexibility, excellent water resistance, and excellent coverage. This technology also allows for excellent adhesion over multiple substrate types.

Olefin Graft Technology based on a patented process combining olefin and acrylate together in same polymer network for enhanced wear resistance, anti-blocking and mar resistance. The grafted acrylate chain hinders the natural migration of the lower density olefin to the surface during drying. The result is a more uniform film composition which improves the appearance and performance of coatings.

Polymeric Surfactant / Alkali Soluble Technology based on polyacrylic & polymethacrylic acid for enhanced dispersancy, compatibility and sequestering in various coating applications.

Metal Crosslinking Technology based on zinc-crosslinking technology or our proprietary “green” crosslinking technology. These unique technologies were designed specifically for use in extremely high gloss, removable floor finishes.

Polymer Plus Technology for select customer applications based on our proprietary technologies. These products are designed for ease of use by our customers in their specific application areas.

Examples of Technology

	<i>pH</i>	<i>Solids (%)</i>	<i>MFFT (°C)</i>	<i>Technology</i>	<i>Comment</i>
6209	8.0	58	0°C	High Solids	Excellent for heatseal, lamination applicaitons
PA-1475	9.2	38	20°C	Olefin-Graft	Slip resistance, anti-block, high formulation compatibility
1511	7.7	25	< 20°C	Polymeric Surfactant	Excellent wetting & dispersibility of pigments
1220	8.2	38	65°C	Zinc Crosslinked	High gloss, reparability and dirt resistance in floor finish
1940	7.6	38	45°C	Green Crosslinked	Zinc Free, durability and alcohol resistance in floor finish
PPCS	7.5	30	< 20°C	Polymer Plus	Ready-to-use, self-crosslinking coating with excellent water, chemical and stain resistances at < 100 g/L VOC
FF Conc A	8.0	36	< 20°C	Polumer Plus	Concentrated floor finish with excellent durability and gloss

Our company

ZS INTERPOLYMER has been producing waterbased specialty polymers since 1963. We manufacture at 4 facilities worldwide (2 in the United States, 1 each in France and China). ZS INTERPOLYMER is a market leader in several application fields:

- Surface care: Polymers for floor care, carpet cleaners and leather care.
- Consumer specialties: Polymers for mascara, household, hair- and skin- care products, etc.
- Industrial specialties: Functional binders for specialty paint and coating applications, polymers for overprint varnishes and inks, flocculants for ceramics, retanning agents.

With close working relationships with customers, our company produces tailor-made products in order to match specific needs. Our technical service and research and development centres will be your creative and innovative partners.