



EPOXIDE FUNCTIONAL POSILOXANE RESIN.

Birotech continuously develops innovative products in a variety of applications.

Established in 2004 specifically to explore and develop the potential of Epoxy-Siloxane Epoxy Functional Siloxane and Amine Functional Siloxane based technology and innovation, we are passionate about silicon technology's versatility, its possibilities and its unique potential to help solve some of the most important challenges facing the coating industry.

Product Name	EEW g/eq	Viscosity mPa s	Description	Application	Recommended Curing Agent
ES-450	370-380	450	<p>EPOXIDE FUNCTIONAL POLYSILOXANE RESIN</p> <p>The coatings from this polymer are hard, tough and have excellent abrasion and solvent resistance, exhibit strong anti-corrosive characteristics, also display antifouling and anti-icing properties The most common substrates are: metal, wood, plastic, concrete</p> <p>Suitable for primer, indoor and underwater application</p>	<p>offshore/marine coatings</p> <p>commercial transport coatings</p> <p>pipeline/tank coatings</p> <p>structural steel coatings</p> <p>antifouling coatings</p> <p>ice-phobic coatings</p>	<p>SA-121</p> <p>SH-120</p> <p>SAW-112</p>
ES-401	475-485	400	<p>EPOXIDE FUNCTIONAL POLYSILOXANE RESIN</p> <p>The coatings from this polymer are hard, tough and have excellent abrasion and solvent resistance, exhibit strong anti-corrosive characteristics, also display antifouling and anti-icing properties The most common substrates are: metal, wood, plastic, concrete</p> <p>Extraordinary gloss retention and weather resistance</p>	<p>offshore/marine coatings</p> <p>commercial transport coatings</p> <p>pipeline/tank coatings</p> <p>structural steel coatings</p> <p>anti-graffiti coatings</p> <p>ice-phobic coatings</p>	<p>SH-124</p> <p>SH-120</p>
ES-400	340-350	250	<p>EPOXIDE FUNCTIONAL POLYSILOXANE RESIN</p> <p>The coatings from this polymer are hard, tough and have excellent abrasion and solvent resistance, exhibit strong anti-corrosive characteristics, also display antifouling and anti-icing properties The most common substrates are: metal, wood, plastic, concrete</p> <p>Shorter curing time than ES-401</p> <p>Extraordinary gloss retention and weather resistance</p>	<p>offshore/marine coatings</p> <p>commercial transport coatings</p> <p>pipeline/tank coatings</p> <p>structural steel coatings</p> <p>anti-graffiti coatings</p> <p>ice-phobic coatings</p>	<p>SH-124</p> <p>SH-120</p>
ES-200	550-650	60	<p>LMW EPOXIDE FUNCTIONAL SILICONE RESIN</p> <p>LMW resins level well because they make solutions of low viscosity even at high concentrations and will continue to level when they are applied and dry to a smooth and glossy film. Therefore, they saturate better than polymers. LMW resins are glossy and hydrophobic, they dry in a glossy hydrophobic film compared to polymers.</p> <p>The coatings from this polymer are hard, tough and have excellent abrasion and solvent resistance. These finishes are also resistant to water, alkali and acids, suitable to use for underwater application.</p>	<p>offshore/marine coatings</p> <p>commercial transport coatings</p> <p>pipeline/tank coatings</p> <p>structural steel coatings</p> <p>antifouling coatings</p> <p>anti-graffiti coatings</p> <p>ice-phobic coatings</p>	<p>SH-124</p> <p>SH-120</p>



ES-100	1150-1250	20	<p>LMW EPOXIDE FUNCTIONAL SILICONE RESIN</p> <p>LMW resins level well because they make solutions of low viscosity even at high concentrations and will continue to level when they are applied and dry to a smooth and glossy film. Therefore, they saturate better than polymers. LMW resins are glossy and hydrophobic, they dry in a glossy hydrophobic film compared to polymers.</p> <p>The coatings from this polymer are hard, tough and have excellent abrasion and solvent resistance. These finishes are also resistant to water, alkali and acids, suitable to use for underwater application.</p>	<p>offshore/marine coatings</p> <p>commercial transport coatings</p> <p>pipeline/tank coatings</p> <p>structural steel coatings</p> <p>antifouling coatings</p> <p>anti-graffiti coatings</p> <p>ice-phobic coatings</p>	<p>SH-124</p> <p>SH-120</p>
ES-50	2700-3000	10	<p>LMW EPOXIDE FUNCTIONAL SILICONE RESIN</p> <p>LMW resins level well because they make solutions of low viscosity even at high concentrations and will continue to level when they are applied and dry to a smooth and glossy film. Therefore, they saturate better than polymers. LMW resins are glossy and hydrophobic, they dry in a glossy hydrophobic film compared to polymers.</p> <p>The coatings from this polymer are hard, tough and have excellent abrasion and solvent resistance. These finishes are also resistant to water, alkali and acids, suitable to use for underwater application.</p>	<p>offshore/marine coatings</p> <p>commercial transport coatings</p> <p>pipeline/tank coatings</p> <p>structural steel coatings</p> <p>antifouling coatings</p> <p>anti-graffiti coatings</p> <p>ice-phobic coatings</p>	<p>SH-124</p> <p>SH-120</p>
MOS-4	N/A	5	<p>Methyl Polysiloxane Resin</p> <p>A solvent-free, low viscous methoxy-functional silicone resin, curing at ambient temperature by catalysis and entering of humidity via a hydrolysis-/condensation reaction.</p> <p>Use with metallic pigments and special formulations to obtain continuous heat-resistance of up to 600 °C.</p> <p>Forced drying, is only possible in presence of air humidity. The addition of the catalyst TnBT must be carried out just before filling (1K system) or just before the application (2K system).</p> <p>Recommended addition level of the catalyst 0.5 - 3% calculated on binder</p>	<p>high temperature application for industrial facilities, power plants, incinerating plants, ventilators, turbines, silencers, ovens, chimneys, oven inserts, barbecues, electric and gas heaters</p> <p>anti-corrosion coatings (depending on formulation)</p>	N/A
MHS-10	N/A	10	<p>Methyl Hydrogen Polysiloxane Resin</p> <p>Methyl Hydrogen Polysiloxane MHS-10 is nontoxic and insipid. As there are fair quantity of relatively active Si-H bonds in the molecule, under the action of catalysts it can react with chemicals containing active groups, such as double bonds or hydroxyl groups. This product can be converted into film and used to produce a resilient waterproof coating on various materials by using metal salt catalyst at low temperature. It equips itself with outstanding water repellent property which prevents damage due to moisture, as well as mildew and rust</p>	<p>Hydrophobing treatment of hardwood.</p> <p>Treatment for hardwood to make them water repellent.</p>	N/A



			<p>development. Besides, its high vapor permeability allows the material to breathe and let water, vapor escape to the outside without causing damage. Suitable catalysts in order of increasing activity include zinc octoate (22% zinc), iron octoate (6% iron), dibutyl tin dilaurate, and tin octoates (28% tin).</p> <p>A typical catalyst concentration is 0.5% to 3%. Concentrations of the more active catalyst must not be increased to the point that bath life becomes too short. Forced drying, is only possible in presence of air humidity.</p>		
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AMINE FUNCTIONAL SILOXANE CURING AGENT

Product Name	AHEW g/eq	Viscosity cP	Gel Time In hours	Description	Application	Recommended Resin
SH-124	120-128	20	4-6	<p>AMINE TERMINATED SILICONE RESIN</p> <p>SH-124 is a reactive amine terminated silicone curing agent used as a crosslinker to improve the physical properties and long-term performance of epoxy-siloxane paints and coatings.</p>	<p>offshore/marine coatings</p> <p>commercial transport coatings</p> <p>pipeline/tank coatings</p> <p>structural steel coatings</p> <p>anti-graffiti coatings</p> <p>ice-phobic coatings</p>	<p>ES-401</p> <p>ES-400</p> <p>ES-200</p> <p>ES-100</p> <p>ES-50</p>
SH-120	115-125	25	4-6	<p>AMINE TERMINATED SILICON RESIN</p> <p>SH-120 is a reactive acrylic modified amine terminated silicone curing agent used as a crosslinker to improve the physical properties and long-term performance of epoxy-siloxane paints and coatings</p>	<p>offshore/marine coatings</p> <p>commercial transport coatings</p> <p>pipeline/tank coatings</p> <p>structural steel coatings</p>	<p>ES-450</p> <p>ES-401</p> <p>ES-400</p> <p>ES-200</p> <p>ES-100</p> <p>ES-50</p>
SAW-112	110-115	20	4-6	<p>AMINE TERMINATED SILICON RESIN WITH NANO FLUID SURFACE TECHNOLOGIES</p> <p>SAW-112 is a reactive amine terminated silicone curing agent with Nano Fluid Surface Technologies (NFST) used as a crosslinker to improve the antifouling properties.</p>	<p>offshore/marine coatings</p> <p>anti-graffiti coatings</p> <p>ice-phobic coatings</p>	<p>ES-450</p>
SA-121	120-125	20	4-6	<p>SILICONE POLYAMIDE RESIN</p> <p>These silicone polyamide curing agents used in applications, as primer, midcoat and topcoat applications on ships, bridges, industrial equipment, and industrial flooring. Benefits include superior corrosion and water resistance, system flexibility and toughness, room temperature cure, very good metal adhesion, good impact resistance. SA-121 has been developed primarily for use with ES-450 resin for primer and indoor finish coat and underwater application</p>	<p>offshore/marine coatings</p> <p>commercial transport coatings</p> <p>pipeline/tank coatings</p> <p>structural steel coatings</p>	<p>ES-450</p>



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Epoxy-Siloxane, Epoxy-Functional Siloxane and Amine Functional Siloxane resins, exhibiting excellent corrosion resistance, substrate adhesion, flexibility, weatherability and superior chemical and impact resistance after curing.

The chemical combination of Epoxy –Siloxane-Acrylic results in polymers with higher performance characteristics than can be achieved by the physical combination of all polymers. The chemical combination provides the basis for the joined polymeric strength, weathering durability, high temperature properties, and radiation resistance, gloss and color retention and corrosion protective properties of the polymers, whilst overcoming the brittleness of inorganic structures.

Possible substrates include: concrete, cementitious products, architectural blocks, internal / external pipes, tanks, containers, off-shore oil drilling platforms, metallic framework, bridges, gas turbine engines, heat exchangers, interior / exterior of ships and aerospace equipment.