

Durle® SI-3016 Water-based Polyimide Resin

Product Durle® SI-3016 water-based polyimide resin is a high-performance polymer

Introduction developed on a water-based system. It is specifically engineered for functional coatings formulations, such as primers for non-stick cookware coatings, high-temperature adhesives, and insulating enamels for high-performance wires.

Coatings formulated with Durle® SI-3016 water-based Polyimide Resin demonstrate durability, abrasion resistance, heat resistance, corrosion resistance, and food-contact safety. They exhibit strong resistance to organic solvents and a broad spectrum of industrial chemicals, along with excellent tribological properties. These cost-effective coatings are widely used in electrical/electronic applications, high-temperature decorative finishes, and anti-corrosion systems.

- ◆ High temperature resistance
- ◆ Superior electrical insulation
- ◆ Corrosion resistance

The solvent system of this resin comprises a blend of water, N-methyl-2-pyrrolidone (NMP), and other substances.

Application Water-based high temperature coatings; High temperature adhesives; Magnet wire enamels coatings; Electrical/electronic components; High temperature decorative coatings; Corrosion protection coatings, etc.

Product	Appearance:	Yellow liquid
Index	Viscosity:	500-4,000cps
	pH:	7.00-9.50
	Specific Gravity:	1.00-1.20
	Solid Content:	8.00%-10.00%
	Tensile Strength:	90MPa
	Water Absorption(boiling):	24h 1.2%
	Elongation at Break:	10% - 20%

	Coefficient of Linear Thermal Expansion(1/°C) : 6.0×10^{-5}
	Dielectric Constant(50 Hz): 3.0
	Dissipation Factor(50Hz): 0.003
	Volume Resistivity(TΩm): 200
Method of application	It can be ground together with pigments or added as the primary resin. Curing conditions: 150° C for 20 minutes, followed by 280° C for 20 minutes, and subsequently raised to 300° C maintained for 10 minutes.
Storage	Store at 0–5°C. Shelf life: 12 months (unopened).
Packaging	50kg/plastic drum; 200kg/plastic drum
Discharge	Do not discharge it into the wastewater system, put it in a specific container for professional disposal.
Emergency treatment	1. In case of leakage or spillage, collect it in a container and clean the ground pollutants with a cloth. 2. If this product accidentally come into contact with the eyes, rinse immediately with plenty of water for at least 15 minutes. If discomfort persists, seek medical attention immediately. 3. If this product comes into contact with the skin, wash with water and soap. Seek medical attention immediately if discomfort occurs. 4. If discomfort occurs from accidental inhalation of spray: immediately move to fresh air and seek medical attention without delay.