SIO-720 Waterborne High-Temperature Silicone Resin Gloss Varnish

SIO-720 Waterborne High-Temperature Silicone Resin Gloss Varnish is a single-component, solvent-free silicone resin dispersion. The cured film exhibits excellent high-temperature resistance (up to 600-800°C). Upon heat curing, it forms a high-hardness silicone resin coating.

SIO-720 retains its gloss even at 600°C, unlike conventional high-temperature coatings that lose gloss at high temperatures. Therefore, SIO-720 can be used as a standalone high-temperature gloss varnish or as a glossy topcoat for high-temperature color paints, effectively overcoming the gloss loss issue of high-temperature color paints.

SIO-720 can be combined with waterborne high-temperature color pastes to formulate glossy color paints that maintain their gloss at high temperatures. It shows excellent adhesion to substrates such as metal, glass, ceramics, and quartz.

Technical Parameters

- **Appearance**: Transparent, slightly white liquid
- **Solid Content**: 30±1%
- **pH Value**: 6.0~7.0
- **Specific Gravity**: 1.02~1.05
- **Diluent**: Deionized water

Main Technical Indicators

Test Item (304 Brushed Stainless Steel)	Test Method	Standard	Test Result
Adhesion	3M Tape Test	0 grade	Pass
Flexibility	90° Bend Test	No cracks or peeling	Pass
Impact Resistance	1kg/100cm (both sides)	No cracks or peeling	Pass
Hardness	Mitsubishi Pencil Test	3H	Pass
Alkali Resistance	5% NaOH Soak for 1 hour	No change or peeling	Pass
Solvent Resistance	Alcohol Rub Test (3kg/300 times), MEK Rub Test (3kg/150 times)	No substrate exposure	500 times, 200 times
Heat Resistance	600℃ for 60 minutes	No discoloration	Pass

Application Range

Suitable as a protective coating for high-end substrates such as glass, ceramics, stainless steel, titanium alloys, aluminum and aluminum alloys, zinc alloys, improving surface hardness, scratch resistance, corrosion resistance, chemical resistance, and high-temperature resistance. It possesses excellent high-temperature resistance, fire resistance, and abrasion resistance, making it an ideal fireproof material for engines, heating pipes, high-temperature ovens, etc. It is compatible with non-resin color pastes.

Usage Method

1. Before applying this product, clean the substrate to remove grease, dust, and other contaminants. For smooth surfaces, it is recommended to perform sandblasting, brushing, or grinding to ensure good adhesion and performance of the subsequent coatings. This product can be applied by spraying, rolling, or dipping.
2. This product requires heat curing. Curing conditions: bake at 250~280°C for 20-30 minutes.

Precautions

1. Application environment: 5℃~40℃.
2. If the product accidentally gets into the eyes, rinse immediately with clean water.
3. Conduct a small test to confirm the optimal usage amount to avoid waste.

Packaging and Storage

- Available in 25 kg packaging.
- Store sealed in a cool place, avoid direct sunlight, and store at room temperature. Shelf life is 6 months if unopened.