

Technical Data Sheet



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Silfluo SILZ-RT8

Description:

SILZ-RT8 is a room-temperature curable fluoro-modified polysilazane coating. It uses polysilazane as the primary film-forming material, combined with a special fluorosilicone resin, along with small amounts of diluents, retarders, and leveling additives. This formulation addresses the limitations of conventional ceramic coatings that require high-temperature curing, while simultaneously delivering high hydrophobicity, anti-graffiti performance, and excellent weather resistance. After curing, the coating forms covalent bonds with the substrate, significantly enhancing mechanical strength, durability, and long-term stability.

Applications

- Electronic encapsulation and protective coatings
- Outdoor hydrophobic, low-surface-energy, anti-graffiti and easy-to-clean coatings
- Anti-aging protective coatings for exterior environments
- Electrical insulation and high-voltage resistant coatings
- Wear-resistant and fire-resistant protective topcoats

The cured coating chemically bonds with the substrate, providing excellent adhesion, mechanical strength, and long-term environmental resistance.

Technical Data

Test Item	Specification	Test Method
Appearance	Light yellow to colorless transparent liquid	GB/T 1721
Solid Content (120±2°C)	>55%	GB/T 1725-2007
Pencil Hardness	≥6H	GB/T 6739-2006
Adhesion	Grade 0	GB/T 9286-1998
Neutral Salt Spray Resistance	>500 h	GB/T 1771-2007
Water Contact Angle	≥120°	GB/T 26490-2011
Artificial Aging Resistance	30 days: no corrosion, no chalking, no cracking, slight discoloration	GB/T 1865-2009

Application Parameters

Parameter	Value	Curing Conditions	
Theoretical Coverage(m ² /kg)	6–8		
Dry Film Thickness(μm)	20–150	Room Temperature Cure	>24 h
Pot Life	4h	Heat Cure (180 °C)	<0.5 h
Diluent	Aromatics, esters, ethers	Recommended Service Temperature(°C)	-30 to 400

Nanjing Silfluo New Material Co., Ltd.

Web: www.silfluosilicone.com Email: inquiry@silfluo.com

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Flash Point(°C)	<22 (solvent flash point)	Instantaneous Temperature(°C)	Max	500
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Special Notes:

SILZ-RT8 is a single-component, self-curing product. After opening, the coating should be used within 4 hours. For longer application intervals, application tools must be cleaned promptly to prevent curing. It is recommended to complete the coating in a single spray pass. Dry film thickness should not exceed 150 µm, otherwise coating performance may be reduced.

Standard Application Procedure: Surface cleaning → Surface roughening → Cleaning and air blowing → SILZ-RT8 application → Curing

Instruction Manual

1. Surface roughening: Grind or sandblast the substrate surface to remove rust, dust, and contaminants. Optimal surface preparation is Sa 2.5; minimum St 3 without mill scale (GB/T 30790.4-2014).
2. Cleaning: Use a suitable cleaner or degreasing agent to remove residual oil and dust.
3. Substrate drying: Ensure the surface is clean and dry before coating.
4. Coating preparation: Single-component system; filter through a 120-mesh filter before use.
5. Application: Spray application is recommended. A 1.0 mm nozzle provides optimal appearance and uniformity. Due to the hydrophobic and oleophobic nature after curing, repeated recoating is not recommended.
6. Curing: At room temperature, surface dry in approx. 1.5 hours, touch dry after >3 hours, fully cured after >24 hours. Heat curing is also possible at 180 °C for 20 minutes.

Storage and Transportation

1. Store in accordance with national regulations. The storage environment should be dry, cool, and well ventilated, away from heat and ignition sources. Containers must be tightly sealed.
2. Recommended storage temperature: 5–30 °C. Shelf life: 12 months.
3. Reseal containers promptly after partial use.
4. Unused mixed material must not be returned and should be disposed of according to local regulations.
5. Products beyond shelf life may be used only after passing inspection.

Disclaimer

The information provided herein is based on laboratory tests and practical experience. Since product usage conditions are beyond our control, the data does not constitute a guarantee of product performance. To comply with local regulations, product specifications may be adjusted without prior notice. Users should consult Nanjing Silfluo New Material for guidance on product suitability for specific applications.

Packaging

In 1kg, 2kg, 5kg, 25kg pail.

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