



Silfluo SILZ-RT6

Description:

SILZ-RT6 is a room-temperature curable silazane coating system based on polysilazane as the primary film-forming material. By incorporating specialized diluents, inhibitors, and leveling additives, this product overcomes the limitations of conventional ceramic coatings that require high-temperature curing. SILZ-RT6 enables ambient temperature application and curing while still forming a dense, ceramic-like protective coating.

Applications

SILZ-RT6 is designed for applications where room-temperature processing is required while maintaining high surface hardness and durability. The cured coating exhibits pencil hardness above 4H, excellent color stability without yellowing, and strong adhesion through covalent bonding with the substrate.

- Coating repair and maintenance;
- Wear-resistant and fire-resistant protective coatings;
- Outdoor hydrophobic, self-cleaning, and anti-aging coatings;
- Protective coatings for service temperatures below 150°C and short-term exposure up to 800°C (substrate dependent);
- Antibacterial and skin-contact-friendly topcoats;

When formulated with compatible fillers, the performance is comparable to SILZ-HT21 systems, providing excellent resistance to acids, alkalis, UV radiation, and environmental cracking. SILZ-RT6 is widely applicable in aerospace, petrochemical, metallurgy, power generation, and military-related facilities.

Technical Data:

Test Items:	Performance indicators
Appearance:	Light yellow to colorless transparent liquid
Density:	0.87 ± 0.02 g/mL
Solid Content (120 ± 2°C):	>40%
Pencil Hardness:	≥4H
Adhesion:	Class 0
Neutral Salt Spray Resistance:	30 days, no blistering, cracking, or rust
Artificial Aging Resistance:	30 days, no chalking or cracking, slight color change
Chemical Resistance:	5% NaCl /H ₂ SO ₄ /HNO ₃ for 30 days, no corrosion
Water Contact Angle:	>105°

Temperature		<10°C	<25°C	<30°C	<180°C
Curing Conditions	Surface dry time	3h	2h	1h	0.1h

Nanjing Silfluo New Material Co., Ltd.

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Technical Data Sheet



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(DFT 20–200 µm, RH 70%)	Full Cure Time	>7 days	>5 days	>3 days	0.5h
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Special Note:

SILZ-RT6 is a single-component, room-temperature curable product. After opening, use within 6 hours. Recommended single-coat application with dry film thickness not exceeding 200 µm.

Standard Processing Procedure: Surface Cleaning → Roughening → Cleaning and Blowing → SILZ-RT6 Room Temperature Curing Silazane Treatment → Curing
Instruction Manual

1. Roughening: Before applying SILZ-RT6 room temperature curing silazane, grind or sandblast the substrate surface to remove rust, dust, dirt, etc. Roughening significantly affects the coating effect; optimal Sa2.5, minimum St3 (no oxide scale) (GB/T 30790.4-2014), so please pay close attention.
2. Cleaning: Use a special cleaning agent or degreaser to remove residual oil, dust, etc., from the roughened surface.
3. Substrate Drying: Ensure the substrate surface is dry and clean before applying SILZ-RT6 room temperature curing silazane.
4. Coating Mixing: This product is a single component. Before use, shake SILZ-RT6 room temperature curing silazane thoroughly and filter through a 400-mesh sieve.
5. Coating Application: For laboratory spraying, a 0.5-1.0 mm nozzle spray gun will provide better appearance and uniformity.
6. Curing: After spraying, the coating should cure at room temperature. Surface dryness should occur in 1 hour, touch dryness in over 4 hours, and fully dryness in over 24 hours. Alternatively, heating can be used for rapid curing.

Storage & Transportation

Store in a dry, cool, and well-ventilated environment away from heat and ignition sources. Storage temperature: 5–30°C. Shelf life: 6 months. Reseal containers tightly after use. Unused material must not be returned and should be disposed of in accordance with local regulations.

Disclaimer

The information provided is based on laboratory and practical experience. Application conditions are beyond our control and therefore no guarantee of performance is implied. Specifications may be revised without prior notice to comply with regulatory requirements.

Packaging

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

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