Silfluo SILZ-RT61

Description:

SILZ-RT61 is a room-temperature curable epoxy-modified polysilazane ceramic coating. It incorporates pigments, zinc phosphate, and inorganic silicon fillers. Compared with traditional heavy-duty anti-corrosion coatings, SILZ-RT61 features easy application, one-coat film formation, and a lightweight thin-film structure. The coating withstands continuous service above 200°C and provides high hardness, dense waterproof performance, excellent rust prevention, resistance to acids and salt spray, weathering resistance, and aging durability. As a novel organic-inorganic hybrid high-temperature anti-corrosion coating, this product contains a variety of composite materials, including high-temperature molecular materials, rust-inhibiting fillers, ultrafine powders, and organic polymer dispersions. After curing, the particles are tightly packed with resin, resulting in a glossy appearance. Simultaneously, the cured film-forming substances are covalently bonded to the substrate, significantly improving the coating's mechanical strength and adhesion.

Applications

1. Boiler components, pipes, valves, heat exchangers, radiators, steel structure equipment in the chemical industry, etc.;
2. Anti-corrosion and anti-rust coating for indoor and outdoor projects such as railway bridges, marine engineering, oil pipelines, metallurgical and chemical facilities, and various steel structures;
3. Anti-corrosion and anti-rust zinc coating for various welded parts, bolts, etc., anti-corrosion and anti-rust coating for metallurgical and chemical iron bridge railings, greenhouses, and outdoor iron railings;
4. Small household appliances, kitchen utensils (burner caps, rice cookers), etc.

Technical Data

Item	Specification	Test Method
Appearance	Gray-white	Visual
Solid Content (%)	65–80	GB/T 1725-2007
Density (g/cm³)	1.5–1.7	Measured
Pencil Hardness	≥5H	GB/T 6739-2006
Adhesion	Grade 0	GB/T 9286-1998
Neutral Salt Spray	>5000 h, no blistering or rust	GB/T 1771-2007
Mixed viscosity	21～30s	GB/T 26490-2011
Artificial Aging Resistance	3d No rust, no powdering, no cracking, slight discoloration	GB-T 1865-2009

Application Parameters

Parameter	Value	Curing Conditions

Technical Data Sheet

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Theoretical Coverage(m²/kg)	6～10	Room Temperature Cure	>24 h
Dry Film Thickness(μm)	40±5	Heat Cure (180 °C)	<0.5 h
Pot Life	6h	Instantaneous Max Temperature(°C)	400
Diluent	Aromatics, esters, ethers	Recommended Service Temperature(°C)	-30 to 300
Flash Point(°C)	<22 (solvent flash point)	Storage Temp (°C)	0－30

Special Notes: This product is a two-component, room-temperature curing product. Mixed coatings should be used within 6 hours. For extended application periods, clean application tools thoroughly to prevent them from hardening. It is recommended to apply in one coat, with a dry film thickness not exceeding 60μm; otherwise, coating performance will decrease.

Standard Processing Procedure: Surface Cleaning → Roughening → Cleaning and Blowing → SILZ-RT61 Treatment → Curing

Instruction Manual

1. Roughening: Before coating, pre-treat 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 specialized cleaner or degreaser to remove residual oil, dust, etc., from the roughened surface.
3. Substrate Drying: Ensure the substrate surface is dry and clean before coating.
4. Coating Mixing: This product is a two-component product. Take an appropriate amount of coating according to the mixing ratio and mix thoroughly. Filter through a 300-mesh sieve before use.
5. Coating Application: For best appearance and uniformity, use a 1.0mm nozzle spray gun in the laboratory.
6. Curing: After spraying, the coating should cure at room temperature. Surface dryness should occur in 1 hour, touch dryness in more than 2 hours, and complete dryness in more than 24 hours. Alternatively, it can be cured quickly by heating (150℃ for 30 minutes).

Product Storage:

1. Must be stored according to national regulations. The storage environment should be dry, cool, and well-ventilated, away from heat and fire sources. The packaging container must be kept tightly closed and handled with care.
2. The storage temperature should be maintained between 5℃ and 30℃. The shelf life is 6 months.
3. Unused coating after opening must be sealed and stored.
4. Unused mixed coating cannot be recycled and should be disposed of according to local regulations.
5. Products exceeding their shelf life can only be used after passing inspection.

Special Note: The information provided above is based entirely on our knowledge gained in laboratories and in practice. The use of the product is generally beyond our control, therefore we only guarantee the quality of the product itself. To comply with local regulations, the product may be modified accordingly, and we reserve the right to modify the instructions without further notice.

Packaging

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