



Silfluo SILZ-FLPSZ

Fluoropolymer-Modified High/Low-Temperature Anticorrosion Coating

Description

Silfluo SILZ-FLPSZ is a one-component, fluoropolymer-modified anticorrosion coating for high- and low-temperature service. The available formulation description identifies a fluorinated olefin-silicon polymer with protected reactive groups that release during exposure to air, supporting adhesion, chain extension and crosslinking. The low initial viscosity promotes wetting and penetration into surface irregularities, forming a dense barrier against oxygen and moisture.

Applications

- Heavy-duty anticorrosion protection for metallic and mineral substrates.
- Protective systems requiring wear resistance, impact resistance and electrical insulation.
- Acid-, alkali-, salt- and solvent-exposure environments, subject to application testing.

Applicable Substrates

Carbon steel, stainless steel, cast iron, aluminum alloy, titanium alloy, high-temperature alloy steel, glass-ceramics, ceramics, cement and leather. Substrate-specific pretreatment and formulation adjustments may be required.

Applicable Temperature

Recommended long-term service temperature: -50 to 280°C; short-term temperature capability: 400°C. Specially adjusted systems may withstand temperatures above 350°C, but the complete coating system must be validated.

Basic Product Data

Item	Typical Value	Test Method
Coating Appearance	Transparent	Visual
Component Type	One-component	Not specified
Density (g/cm ³)	1.02-1.13	Measured

Coating Performance

Test Item	Performance Indicator	Test Method
Condition in Container	Uniform; no lumps or sediment	Visual
Viscosity at 25°C	50-70 s, Ford Cup No. 4	GB/T 1723-1993
Adhesion - Cross Cut	Grade 0	GB/T 9286-1998

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Test Item	Performance Indicator	Test Method
Neutral Salt Spray Resistance	5000 h: no blistering, cracking or rust spots	GB/T 10125-2021
Chemical Reagent Resistance	50% H ₂ SO ₄ / 50% NaOH / 5% NaCl: 180 d, no blistering, peeling or rust	Method not clearly specified
Abrasion Loss	0.019 g (750 g / 500 cycles, CS10 wheel)	GB/T 1768-2006
Chemical-Wastewater Immersion	40°C / 300 d: no blistering, peeling or rust	GB/T 7410-1987

Construction Parameters

Item	Parameter	Item	Parameter
Coating Solids (%)	≥45	Heat Cure	120-140°C, <2 h
Theoretical Coverage (m ² /kg)	10-15	Self-Curing Time	1-6 h surface-dry; about 8 h full-dry*
Dry Film Thickness (μm)	30-200	Recommended Working Time	≤3 h*
Thinner	Alkanes, esters, ethers	Max. Instantaneous Temperature	400°C
Flash Point	<22°C (solvent flash point)	Recommended Service Temperature	-50 to 280°C
Storage Temperature	5-35°C	Shelf Life	12 months

Special Notes

Apply 2-3 coats as needed, targeting approximately 40 μm per coat and 100-200 μm total thickness. Allow at least 30 minutes between coats and recoat before full cure. Available data includes both a 6-hour construction-table working time and a 3-hour application recommendation; use 3 hours as the conservative working limit until confirmed by an application trial. Drying time depends strongly on film thickness, temperature and air movement.

Standard Application Procedure: Surface Cleaning -> Surface Preparation -> Cleaning and Drying -> SILZ-FLPSZ Application -> Curing

Application Instructions

1. Surface Preparation: Dry damp substrates and remove oil, loose corrosion and raised defects. Repair concrete voids with a compatible filled resin system and allow it to dry before coating.
2. Metal Preparation: Remove rust to at least St 2 or Sa 2; use Sa 2.5 where higher performance is required.

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3. Coating Application: Spray 2-3 coats according to the exposure environment. Apply uniformly without missed areas or sagging.
4. Intercoat Time: Maintain at least 30 minutes between coats and apply the next coat before the previous coat fully cures.
5. Curing: At approximately $20 \pm 15^{\circ}\text{C}$ and $65 \pm 20\%$ RH, surface drying may require about 6 hours; reported approximate values are 5 hours at 30°C , 4 hours at 40°C and 3 hours at 50°C . Avoid an abrupt temperature ramp.
6. Inspection: Check for a continuous, uniform film with no missed areas; verify the required project properties using suitable instruments.

Safety and Storage

1. Store in a dry, cool and well-ventilated area away from heat and ignition sources. Keep containers tightly closed and handle them carefully.
2. Maintain the storage temperature between 5°C and 35°C . Shelf life is 12 months in the original, unopened and tightly sealed container under the recommended conditions.
3. Keep the one-component product tightly sealed when not in use.
4. Do not return dispensed, mixed or contaminated material to the original container. Dispose of unused material in accordance with local regulations.
5. Material beyond its shelf life may be used only after it passes an appropriate inspection.

Packaging

Available in 1 kg, 2 kg, 5 kg and 25 kg pails.

Special Note

The information above is based on currently available technical data, laboratory knowledge and practical experience. Because application conditions are outside our control, Silfluo warrants only the quality of the supplied product. Users must determine suitability through their own formulation and application tests and verify applicable local requirements. Contact Silfluo for application guidance.

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