

TITANCARE® PO

TECHNICAL DATA SHEET V 1.0

PRODUCT INFORMATION

ADVANCED NANO COMPOSITE MATERIAL APPLICATION



General Description

- green material, 100% non-toxic and environmentally-friendly
- easy to use, long lasting 24/7 basic functionality
- Excellent heat resistant up to 500 °C
- tested by worldwide renowned authorities such as Microbac, SGS and others

Features

- efficient repair of cracks
- environmental protection
- perfectly prevents mold growth
- resistance to weathering
- can be used as a substrate for TitanCare® dust proof coating
- perfect adhesion and durability on any material like, marble and stone, cement, gypsum board, wood

Function and application

TitanCare® PO is a sealant for kinds of walls. It has excellent seam filling and water resistance (to prevent water vapor), weather resistant and has good adhesion with various kinds of substrates.

After spraying on the surfaces, it forms a transparent colorless film to efficiently fill seams and cracks protecting surfaces from water seepage and mold. It is a single-liquid type with easy application.

Standard Packing

1kg bottle, 20kg/plastic drum & 200kg/plastic drum

Storage

Please store under room temperature 25 °C, humidity >45% with good ventilation and avoid exposure to direct sunshine. Keep container sealed after opening. Shelf-life 1 year from date of manufacture.

Material and functional division

- Colorless transparent protective coating
- Enhanced flexibility
- Protection against cracks

Wood

Material	Function	fill	waterproof	mildew
Logs		×	×	○
Solid wood		×	×	○
Painted wood		×	×	○

Stone

Material	Function	fill	waterproof	mildew
Cement wall		○	×	○
Rough surface wall		○	×	○
Rough stone surfaces		○	×	○
Tile Gaps		×	×	○
Polished stone surfaces		×	×	×
Glued stone		×	×	×
Soaked area		×	×	×

Specification & Safety

	Item	Conditions/ Units	Specifications
Character	Appearance	Standard	Milk white liquid
	Composition	-	Resin H ₂ O SiO ₂
	Solid content	wt%	32% ± 2
	pH	-	8.0 ± 1
	Viscosity	25 °C mPa s	<1100
	Minimum film forming temperature	°C	5~12

Reference – Thin Film Function

Item	Method	Unit	Properties
Appearance	-	-	Transparent
Cross Cut	CNS10757	%	5B
Anti-wiping (with water)	1)	N/mm ²	300 times
Elongation	DIN EN ISO 527-3	%	>400%
Tensile strength	DIN EN ISO 527-3	N/mm ²	5~7
Color difference	ASTM D2244-11	-	$\Delta E \leq 1$
Weatherability	ASTM G155	hr	1500 ²⁾
Anti - mildew	ASTM G21	grade	0 ³⁾

Test Method: Brush 150g/m² on the substrate to make a 5um thin film, Tile base (stone) film forming conditions at room temperature for 72 hours.

- 1) Test Method: Load 500g weight on the substrate and wipe by non-dust cloth with water, No wrinkle, scratch, peeling allowed on the surface.
- 2) No scratch, peeling allowed on the surface.
- 3) Test method for the first tile substrate placed potato culture dish after spraying 1g of bacteria in the tile substrate and placed in a 25-degree incubator for 28 days.

ASTM G21 test fungal species determination and effect level

Level	Growth Status
0	No mold growth
1	Micro-growth (mold growth area < 10%)
2	Mild growth (mold growth area between 10% to 30%)
3	Moderate growth (mold growth area between 30% to 60%)
4	Severe growth (mold growth area > 60%)

Weatherability

Project	Material	Times	Appearance
Outdoors	Cement	>1500hrs	No change
	Brick		No change

Dust-proof

Project	Material	Primer	Surface coating	Water-resistant scrubbing Ten times	Dust Proof effect ²⁾
		TitanCare® PO Recommended grams (g/m ²)	TitanCare® TSR Recommended grams (g/m ²) ¹⁾		
Dust-proof	cement	100~150	30~50	No change	No change
	brick	150	50	No change	No change
	tile	100~150	30~50	No change	No change

¹⁾ After Brushing with TitanCare® PO allow three hours to cure, spray TitanCare® TSR and set for 72 hours to mature

²⁾ scrubbing process using a sponge brush to wash the surface of the object ◦

³⁾ After completion of scrubbing process, the surface needs to be dry for more than 4 hrs before the Dust-proof test.

Process Condition

1. Method

- a) Spraying: use spray gun diameter 0.3 mm~3 mm, air pressure 0,5 g~1 kg under room temperature 10~40 °C
- b) Brushing: use brush to process under room temperature 10~40 °C

2. Process

- a) Clean the surface of the substrate
- b) Dilute the solutions with RO water 1~5 times
- c) Spraying, brushing 2~4 layers according to demand
- d) Temperature: Room temperature 72 hours

The data above is for references. Please use the materials based on actual substrate & environment.

Safety & Notice

1. In order to ensure product reliability, please apply under clean environment.
2. Keep containers sealed after opening and store under recommended environment.
3. Minimum Storage temperature = 5°C, ensure good ventilation.
4. Precipitation and slight color change to light yellow is normal.
5. Please refer to Safety Data Sheet (SDS) for more details.

Product Stewardship

Scutum Nano Solutions GmbH encourages its customers to ensure that our products are not used in ways for which they are not intended or tested. Our personnel assist you to answer your questions and to provide reasonable technical support. Scutum Nano Solutions GmbH safety data sheets should be considered prior to use.

Disposal

Disposal according to official regulation, not contaminated and completely emptied packaging can be recycled.

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