

# SM 50

## water repellent polymer-modified one-coat render

- Excellent workability
- Strong adhesion to the substrate
- It allows water-vapour permeability of surfaces
- Eliminates material loss and significantly reduces the labor cost



## SM 50

### water repellent polymer-modified one-coat render

#### DESCRIPTION

Ready-mixed, cement-based, one-coat render, with high quality white marble sand of selected grain size, modified with polymers and other special admixtures, used instead of the base-coat and the final-coat render producing a level and smooth final surface.

It exhibits high mechanical strengths, strong adhesion to the substrate, reduced water permeability of the final surface and excellent workability either when applied with a pumping machine or by hand, without sagging or cracking of the final surface.

Classified as one-coat (OC) mortar type CS III, W1 according to the European standard EN 998-1.

#### APPLICATIONS

Applied after the rough cast render (SP 20), replacing the base-coat (SB 30) and final-coat render (ST 40 or ST 45 FINE). It enables the application of the layer thickness required for the levelling of the masonry without sagging, while providing a smooth final surface without cracks ready to be painted.

Can also be used for minor repair works.

It is suitable for indoor and outdoor applications.

#### PROPERTIES / ADVANTAGES

- Excellent workability either when applied by hand or with a pumping machine.
- Increased water repellent properties providing reduced water permeability of the final surface.
- It allows water-vapour permeability of surfaces.
- High adhesion to the substrate and increased mechanical properties.
- Smooth final surface, ready to be painted.
- It does not crack.
- Eliminates material loss and significantly reduces the labor cost.

#### HARMONIZED STANDARDS / REGULATIONS

- EN 998-1:2010: One-coat (OC) rendering mortar for external and internal use, type CS III, W1.
- Regulation (EC) No. 305/2011: CE marked product with Declaration of Performance (DoP): SM50/CPR-7-13/012/10-2013.

#### APPLICATION INSTRUCTIONS

- Before application surfaces must be clean, free of dust, grease, loose remnants, etc.
- Final-coat render SM 50 is applied to substrates previously prepared with rough cast render SP 20.
- During hot or windy weather, it is recommended to thoroughly dampen the substrate before the application of SM 50, in order to avoid rapid dehydration of the render.
- The content of the bag (25kg) is gradually added into 5.25-5.50 kg of clean water under continuous stirring until a homogenous mixture without lumps is formed, having the desired workability. Use a suitable mortar mixing and pumping machine, or a standard mortar mixer, or even a low speed power drill (approx. 300rpm).
- Apply the render by a mortar pumping machine or by hand using a trowel to the desired thickness and then level the surface using a metal featheredge.
- Let the surface stiffen and then treat it by spraying a small quantity of water and rubbing with a hard rubber or a float sponge.
- Stiffening time depends on the type of the substrate, the applied render thickness and consistency, as well as the ambient conditions.

#### CLEANING OF EQUIPMENT

Clean all tools and application equipment with water immediately after use. Hardened material can only be mechanically removed.

#### RECOMMENDATIONS

- Temperature during application should be between +5°C and +35°C.
- Do not mix the product with dirty or salty water.
- Do not use excess water as it will affect the product's final adhesion strength and mechanical properties.
- Avoid long mixing time as it entrains too much air in the mortar, subsequently affecting the mechanical properties of the product.
- Application thickness should not exceed 2cm per layer. Otherwise, apply the render in successive layers while reinforcing the render after the 2/3 of total thick-

ness, with the suitable alkali-resistant fiberglass mesh (90g/m<sup>2</sup>, 10x10mm), especially at the points of contact of different materials (concrete-brick, brickwork, insulating materials, etc.), at the corners of frames, in cable channels, etc.

- Avoid excess treatment of the surface of the render or excess use of water during the sponge finishing procedure

as it may cause the creation of capillary micro-cracks on the surface.

- The application of very thick layers and the application during ambient conditions other than those specified may cause the creation of micro-cracks on the render surface.
- Do not add water after the mix has started to set.

TECHNICAL CHARACTERISTICS	
PRODUCT CHARACTERISTICS	
Appearance	cementitious powder
Colour	white
Bulk density	1.50 ±0.05 kg/lt
Maximum aggregate size	1.2 mm
APPLICATION CHARACTERISTICS (+23°C / 50% R.H.)	
Mixing ratio	21-22% b.w. (5.25-5.50 kg water / 25kg bag)
pH	> 11
Density (EN 1015-6)	1.70 ±0.05 kg/lt
Application temperature	minimum: +5°C / maximum: +35°C
Pot life	2 hours depending on ambient conditions
Stiffening time for sponge finish	30-60' depending on ambient conditions
Application thickness per layer	5-20 mm
Consumption	approximately 14-15 kg/m <sup>2</sup> for a 1cm thick layer
PERFORMANCE CHARACTERISTICS	
Density of hardened mortar (EN 1015-10)	1.40 ±0.05 kg/lt
Compressive strength after 28 days (EN 1015-11)	≥ 3.50 N/mm <sup>2</sup> - Class CS III
Flexural strength after 28 days (EN 1015-11)	≥ 1.50 N/mm <sup>2</sup>
Adhesion to concrete (EN 1015-12)	≥ 0.35 N/mm <sup>2</sup> - FP:B
Capillary water absorption (EN 1015-18)	≤ 0.35 kg/m <sup>2</sup> ·min <sup>0.5</sup> - Class W1
Water permeability after aging cycles (EN 1015-21)	≤ 1.00 ml/cm <sup>2</sup>
Water-vapour diffusion coefficient, μ (EN 1015-19)	5/20 (table value)
Thermal conductivity coefficient, λ <sub>10,dry</sub> (EN 1745)	0.47 W/mK (table A12 for P=50%)
Reaction to fire (EN 13501-1)	Class A1

**Note:** Measurements were conducted in a laboratory environment. The varying conditions present on-site (temperature, humidity, ventilation, substrate absorbency) may affect the material's properties.

#### SAFETY PRECAUTIONS

- The product contains cement which has an alkaline reaction with water and is classified as irritant.
- Always wear appropriate personal protective equipment for eyes and skin (protective clothing, gloves and goggles).
- If skin contact occurs, rinse well with plenty of clean water.
- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- Consult product's Safety Data Sheet for further instructions on safety handling.
- **PRODUCT FOR PROFESSIONAL USE.**

#### PACKAGING - STORAGE

Available in:

- 25kg paper bags.

**Storage:** 12 months from production date, if stored in original, sealed packaging, protected from direct sunlight and moisture.

## LEGAL NOTICE

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