

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



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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 the summer months, it is recommended to pre-wet the substrate before the application of SM 50 in order to prevent rapid drying 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/m², 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 ² 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 ² - Class CS III
Flexural strength after 28 days (EN 1015-11)	≥ 1.50 N/mm ²
Adhesion to concrete (EN 1015-12)	≥ 0.35 N/mm ² - FP:B
Capillary water absorption (EN 1015-18)	≤ 0.35 kg/m ² ·min ^{0.5} - Class W1
Water permeability after aging cycles (EN 1015-21)	≤ 1.00 ml/cm ²
Water-vapour diffusion coefficient, μ (EN 1015-19)	5/20 (table value)
Thermal conductivity coefficient, λ _{10,dry} (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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