MORCEM® LITE 12

DESCRIPTION

Lightweight, fast-drying insulating semi-dry mortar for screeds, tiles and roofs. Perfect for sloping and flat roofs, screeds of light slabs and insulation in new construction or rehabilitation. This semi-dry mortar can be used as a complement of floor insulation. Also for floating floors and quick-drying light screeds for all types of flooring.

ADVANTAGES AND USES

- Quick-drying light screed for all types of flooring, even if they are sensitive to moisture (such as parquet, etc.).
- Floating floors on acoustic impact insulation sheets.
- Light and insulating floor screeds in new construction or rehabilitation.
- Floor insulation complement.
- Sloped and flat roofs with direct application of the waterproofing membrane.

Due to its low density and great flexibility of use, this product is particularly convenient for rehabilitation.

PROJECT SPECIFICATION

Floor tiles / Floor screed /... made with light semi-dry mortar pre-mixed in Morcem® Lite 12 sack, with a special hydrophobic Expanded Clay base (water absorption after 30 minutes less than 1% according to UNE EN 13055-1 standard) specific binders and additives.
Approximate density 1200 kg/m³. Average compressive strength certified 16.0 MPa (UNE EN 13892-2) - Certified thermal conductivity 0.39 W / mK (UNE EN 12667).
Drying time ((3% residual humidity): 7 days approx. for 4 cm thickness (adhered screed) - 10 days approx. for 5 cm thickness. CE marking according to UNE EN 13813
Supplied in sacks, kneaded with water according to the manufacturer's instructions, spread, compacted, levelled and smoothed in the thickness of cm ...

APPLICATION PROCEDURE

PREPARATION OF THE SUBSTRATE

The substrate must be clean, without loose elements free of dust, oil, rust and residues of plaster, mortar, oils, paints, etc. and it must have good compressive and tensile strength. In the case of the passage of electrical and sanitary installations, they must be adequately protected and separated to avoid any possible damage during the installation of the material.

Old substrates are generally quite dry and absorbent therefore it is advisable to take measures against the risk of excessive loss of water from the mass by absorption (abundant wetting and or placement of breathable waterproof canvases where possible, application of specific primers, etc.).

When using the product in wooden floors on decking, it is recommended to place a breathable waterproof canvas between the wood and the concrete.

If there is a possibility of ascending capillary humidity from the lower layers towards the Morcem® Lite 12, it is advisable to place a vapour barrier between the product and the substrate.

Rev. 2022_04 · This revision cancels all previous ones. Please, obtain the latest version from our web site · www.grupopuma.com · (+34) 957 76 40 40

PREPARATION OF THE MIXTURE

Morcem Lite 12 should not be mixed with any other material or additive. The mixture is easily prepared with the help of a normal concrete mixer, planetary mixer or pneumatic mortar mixer-conveyors (or "pneumatic mortar pumps"). The use of mixer-beaters for glue cement is not allowed.

- Empty the content of one or more sacks into the concrete mixer (do not fill the concrete mixer beyond 60% of its capacity).
- Add around 3 litres of clean water approximately for each 25 litre sacks.
- Knead for approximately 3 minutes until obtaining a homogeneous dough with a semi-dry consistency.

The amounts of water indicated above are based on our experience. Using larger amounts can extend the drying time, hamper the workability of the mix, and cause surface ¨"bleeding". Not adding the corresponding amount of water may lead to an incorrect setting of the concrete and cause the mass to dry out. The operator must carefully control the consistency of the dough and the rest of conditions on site. For example, in summer the water amount may be increased due to higher levels of evaporation caused by high ambient temperatures. Do not extend the mixing time.

In the case of pumping Morcem® Lite 12 with pneumatic-type mortar mixer-conveyors (or “pneumatic mortar pumps”), the amount of water in the mass must be increased according to the pumping distance.

APPLICATION AND FINISH

Place Morcem® Lite 12 using normal construction techniques for screeds of semi-dry consistency: make the lateral levelling masters at the exact level required, pour and spread the mass, compacting and compressing it properly, level with a ruler until reaching the desired thickness. Finally proceed to the manual smoothing (by means of trowel or trowel) or mechanically with suitable tools.

During laying, Morcem® Lite 12 must be decoupled from the walls / pillars using a flexible material, 3-5 mm thick, of a height similar to, at least, the final thickness of the screed.
Place retraction joints when the length / width ratio is greater than 3 and with irregular surfaces (L shapes and / or similar). The size of the tablets must not exceed 5x5m = 25m². Foresee, as for a traditional screed, the possibility of adding joints also in correspondence with thresholds, discontinuities, corners and edges, openings, etc. The existing structural joints in the substrate must be respected by moving to the full thickness of the slab.

Installation: Put a galvanized metal mesh (mesh of 5x5 cm, Đ 2 mm) in the areas of passage of the facilities (electrical and sanitary) if the coating thickness is less than 5 cm (minimum coating 3.5 cm).

Adhered beam: If the thickness oscillates between 4 and 5 cm, the screed must be put during construction work adhered to the substrate. Adhesion to the substrate should be done using a primer - adhesion bridge from the PUMA GROUP range, TEXTURE FIX PLUS or PAVILAND PRIMER R being especially recommended depending on the conditions and absorption of the substrate (consult the corresponding technical data sheets). In the case of adhered beam, due to the reduced thickness, it is recommended to pay particular attention to the compaction of Morcem® Lite 12.

Curing process: Protect the newly installed slab against the risks of drying out which will depend on the excessive loss of water towards the upper part (atmosphere) in particular with high temperatures or with strong ventilation - (protect with a plastic canvas) and lower (see “ substrate preparation ”).

Glued parquet: Morcem® Lite 12 beams are very compact, so the absorption of water contained in adhesives in aqueous dispersion is slow. In case of laying parquet, depending on the type of wood and the size of the pads, the use of water-free adhesives is recommended (for example: epoxy-polyurethane or MS technology).

Rev. 2022_04 · This revision cancels all previous ones. Please, obtain the latest version from our web site · www.grupopuma.com · (+34) 957 76 40 40

grupopuma

RECOMMENDATIONS

- Do not add water to Morcem® Lite 12 once it has been mixed or re-mix it.
- Do not mix by hand or with mortar mixers-beaters.
- Compact the product well during installation (before levelling with the screed)
- Morcem® Lite 12 once in place should be protected from excessive dehydration, particularly at high temperatures or with strong ventilation. Special attention should also be given to very absorbent substrates (wet the the areas before starting working or apply a PAVILAND PRIMER R) and small thickness as it might cause the dessication of the spill and therefore the creation of cracks .
- Do not water the area with water once the Morcem Lite has been placed.
- The product should not be exposed to rain water or any other external agents immediately after been placed and before applying the finish layer, as it may affect its hardening and drying process; nor should the product be by direct means or applied loads.
- Excessive trowelling time with mechanical means can lead to an extension of the drying time.
- If there is a possibility of ascending capillary humidity from the lower layers towards the Morcem® Lite 12, it is advisable to place a vapour barrier between the product and the substrate.
- If an acoustic sheet is to be installed, increase the thickness of the levelling layer according to the thickness of the elastic insulation:
  - Elastic insulation thickness 3 ÷ 6 mm: mortar thickness 6 cm
  - Elastic insulation thickness 7 ÷ 12 mm: mortar thickness 7 cm
  - Elastic insulation thickness 12 ÷ 20 mm: mortar thickness 8 cm

- If locally the thickness of the screed ranges between 3.5 and 5 cm (only for limited surfaces), it is recommended to insert a galvanized metal load distribution mesh (mesh of 5x5 cm, Đ 2 mm), placed in the middle of the thickness of the mortar layer, and the use of a bonding bridge to ensure adherence to the substrate (contact the GRUPO PUMA technical department).
- When dealing with concrete layers which have been carried out during different times (by cutting the slab perpendicular to the substrate plane), it is advisable to place additional reinforcement (mesh or metal cut-outs) to avoid cracks or separations between the different parts.
- Non suitable material for less than 4 cm thickness.
- Do not apply the product under extreme weather conditions (best between +5ºC and +35ºC)
- Non-suitable material to introduce in silos.
- All compression resistance values refer to specimens made on site with the amount of water indicated in this technical data sheet, cured and tested according to current law and UNE standards.

PACKAGING AND STORAGE

16 litres sacks on wooden pellets. 84 sacks per pallet.
1 year storage in its original packaging, away from extreme weather conditions and humidity.

Rev. 2022_04 · This revision cancels all previous ones. Please, obtain the latest version from our web site · www.grupopuma.com · (+34) 957 76 40 40

MORCEM® LITE 12

TECHNICAL DATA

Bulk density in packaging	1100 Kg/m³ approximately
Dry hardened density	1200 Kg/m³ approximately
Application time (at 20ºC)	60 minutes
Application temperature	From + 5 °C to + 35 °C
Cloth surface without shrinkage joints	up to 25 m²
Approximate foot transit	24 hours after being placed
Flexo-traction resistance 28 days (UNE EN 13892-2 Norm)	16 MPa - N/mm² (160 kg/cm²)
Bending strength at 28 days (UNE EN 13892-2)	3,0 MPa - N/mm² (30 kg/cm²)
Certified thermal conductivity (UNE EN ISO 12667)	λ=0,39 W/mK
Calculation thermal conductivity (UNE EN ISO 10456)	λ=0,43 W/mK
Drying time (3% humidity in mass in laboratory at 20 ° C and 55% RH)	Esp. 4 cm (adhered beam)*: 7 days approximately.
Resistance to water vapour (UNE EN ISO10456)	μ=6 (humid field)
Permeability to water vapour (UNI 10351)	δ=2,6*10-12 kg/msPa
Specific thermal capacity Cp	Cp =1000 (J/kgK)
Reaction to fire (UNE EN 13501)	A1 Eurotype (Incombustible)
Application thickness (check advises and warnings): • Non- adhered beams (not adhered to the substrate and or on vapour barrier. • Adhered beams (Adhered to the substrate, with adhered primer) • Floating beams (on acustic sheets)	≥ 5 cm ≥ 4 cm ≥ 6 cm
Laying ceramic tiles and stone cladding	Approximately 3 days after laying the screed
Approximate yield	11,75 L/m2 and cm of thickness
CE stamp	EN 13813 CT-C16-F3
Packing	16 litres sacks on wooden pellets. 84 sacks per pallet

(3% humidity in mass in laboratory at 20 ° C and 55% RH).

Rev. 2022_04 · This revision cancels all previous ones. Please, obtain the latest version from our web site · www.grupopuma.com · (+34) 957 76 40 40

grupopuma

LEGAL DISCLAIMER

The instructions for use are given according to our tests and knowledge and do not imply any commitment by GRUPO PUMA nor free the consumer from the examination and verification of the products for their correct use. Claims must be accompanied by the original packaging to allow a proper traceability.

GRUPO PUMA is not responsible, in any case, for the application of its products or constructive solutions carried out by the application company or other parties involved in the process and / or execution of the work, limiting the responsibility of GRUPO PUMA exclusively to the damages directly attributable to the supplied products, individually or integrated in systems, due to failures in their manufacturing process.

In any case, the drafter of the work project, the technical management or the person responsible for the work, or collaterally the application company or other parties involved in the process and / or execution of the work, must ensure the suitability of the products addressing the characteristics of them, as well as the conditions, support and possible pathologies of the work in question.

The values obtained by GRUPO PUMAS's products or its constructive solutions that, as the case may be, are determined by the EN standards or any other regulation that applies to it in each case refers exclusively to the conditions specifically stipulated in said regulation and that are referred to, among others, to certain characteristics of the support, humidity and temperature conditions, etc. without being them required in the tests obtained under different conditions, all in accordance with the relevant regulation.

Rev. 2022_04 · This revision cancels all previous ones. Please, obtain the latest version from our web site · www.grupopuma.com · (+34) 957 76 40 40