



## MORCEM® LITE 6

Ready-mixed concrete recommended for roofs, screeds and floors with direct application of the finish

### DESCRIPTION

Lightweight insulating mortar of closed texture for FORGED STEEL AREAS AND FLAT BUILT-UP ROOFING WITH THE DIRECT APPLICATION OF THE FINISHED PRODUCT OR THE WATERPROOF SHEET.

### ADVANTAGES AND USES

- Roofs: Flat and sloping roofs isolation (15% maximum) in collaboration of the waterproof sheet system.
- Reconstruction of lightweight screeds and insulations in restoration work and new construction.
- Light placement screed and insulations for any type of ceramic pavement.
- Stuffings and levels

Due to its low density and easy application, this product, is specially appropriate for restoration.

### PROJECT SPECIFICATIONS

Reinforcement and isolating screed/ sloping lightweight and isolating roof/... made out of ready-mix lightweight mortar in "Morcem® Lite 6" bags ,with a base on special hidrophobe expanded clay (water absorption after 30 minutes if its less than 1% according to UNE EN 13055-1 regulation), specific conglomerates and additives.

650 kg/m2 density - Certificated compression average resistance 7,0 MPa (UNE EN 13892-2)-

Certificated thermal conductivity 0.18 W/mK (UNE EN 12667).

CE hallmarked according to UNE EN 13813 regulation.

Provided in bags, mixed with water according to the manufacturer's instructions, expanded and levelled in the thickness required.

### APPLICATION PROCEDURE

#### SUBSTRATE PREPARATION

The substrate must be clean, free of dust, oil or rust. Free of any plaster, mortar, oils or paint waste , etc. . It must provide the user with a great compressive and tensile resistance. In the event of being on the way of electrical and sanitary installations, they must be appropriately protected and isolated in order to prevent possible damage during the use of the material.

Old substrates are generally very dry and absorbent and hence, it is recommended to take preventive measures against any possible risk of water loss from the mass by absorption (abundant moistening and / or installation of waterproof tarpaulins where possible; application of specific primer coats, etc. )

When pouring into timber decks of wood it is recommended to place a waterproof breathable tarp between the piece of wood and the concrete.

# LIGHTWEIGHT RESTORATION

## MORCEM® LITE 6

A vapour barrier is recommended to be placed between the product and the substrate if there is any possibility of capillary damp rising from the lower layers towards "Morcem® Lite 6"

### PLASTER MIXING

TERMO 6 does not require any other material or additives. The mixing can be easily prepared using simple concrete mixers, planetary mixers, pneumatic concrete mixers (or "pneumatic mortar pumps") or simple electric mixers with a high number of revolutions.

#### Concrete mixers

- Empty the whole amount of one or more bags (do not fill more than 60% of the capacity of the mixer)
- With the mixer already on, gradually add around 4 litres of clean water per every 25 litre sacks.
- Keep mixing for approximately 3 minutes, until a homogeneous and consistent plaster is obtained.

#### Current electric mixer with a high number of revolutions

- Use a big pot (double the size of the amount to be mixed)
- Pour 1/3 of water into the pot, empty one or more bags (always full bags), keep adding the rest of the water (with the proportion of 4 litres for a 25 litre bag) mixing for approximately 5 minutes until a homogeneous and consistent plaster is obtained.
- Let the plaster rest for a couple of minutes and then mix it with a trowel in order to make sure all the plaster is properly mixed and there is uniformity between the lower and the upper part of the plaster.
- Mix for two more minutes with the electric mixer.

The amount of water above mentioned is based on our own experience. The use of higher quantities might affect the resistance and may caused "bleeding" or secretion. Lower quantities of water might affect the concrete hardening and may cause the draining of the plaster. The user must control the consistency of the plaster and the rest of the conditions in the yield. For example, in summer, more amount of water might be needed due to greater evaporation caused by higher weather temperatures. Do not apply the product with dry consistence. Do not prolong the mixing time.

#### Pneumatic mortar pumps

The use of pneumatic concrete mixers conveyors (or pneumatic mortar pumps") requires more amount of water in the plaster depending on the pumping distance. Please note you might not get the same results as when you use common concrete mixers.

### APPLICATION AND FINISHING

After setting the level markers, spread the mortar until you get the desired thickness and then level it with a rule. The product does not require to be compacted.

#### FINISH COAT

"Morcem® Lite 6" should not be left uncover, so it is recommended to use some kind of coating.

# LIGHTWEIGHT RESTORATION

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"Morcem® Lite 6", due to its close structure, is very convenient for the direct application of the finishing material or for the waterproof sheet (for example waterproof felt roofing in flat roof slopes; and deflated pavement which are not sensitive to humidity in screeds) without adding any regularization mortar layer.

Pay special attention to the mortar consistence (Please remember the product should never be placed with a dry or medium- dry consistence) when applying it (smoothness and flatness) and when treating it, protecting it from quick drying, that will depend on the excessive loss of water in the upper part (atmosphere- plastic tarpaulin protection) and lower part (see "preparation of the substrate").

After some time of adequate treatment (15 days) you may proceed with the application by using ceramic floor tiles adhesive mortar, clay tiles and natural stone.

If it is used as placement screed inside a building, "Morcem® Lite 6" should be dissociated from the wall, by using a flexible material of 3-5 mm thickness, with a similar height. The existing structural joints in the substrate will need to be respected so as the rest of the screed thickness.

### RECOMMENDATIONS

- Do not add any extra water to "Morcem® Lite 6" once the plaster has been mixed.
- Do not mix manually nor with mortar mixers.
- Do not add any other material nor any conglomerates such as concrete, lime, gypsum, or any other additives.
- Once "Morcem® Lite 6" has been placed, it should be protected from excessive dehydration, specially under high temperatures or heavy ventilation. Please pay attention to absorbent substrates (moisturise it or use other type of techniques) and to small thickness in order to avoid fast drying of the spilt and avoid cracks.
- Do not water the area once "Morcem® Lite 6" has been applied.
- "Morcem® Lite 6" is not a quick drying product
- In case of ascendant capillary humidity from the lower layer towards the "Morcem® Lite 6", it is recommended to place a vapour barrier between the "Morcem® Lite 6" and the substrate.
- If the product has just been placed on site, before the final laying, it should not be exposed to rain water nor to any other external issues that might damage the final results.
- In the event of placing waterproof sheets on roofs (15% maximum slopes): Pay attention to the top area of the substrate, which should be smooth and flat, clean and dry.
- In case of using waterproofing materials on roofs with residual humidity of the product, it is advised to place materials that will allow the evacuation of excess humidity.
- The material is not adequate to be placed with less than 5cm thickness.
- The material is not adequate to be placed with less than 5°C temperatures or more than 35°C.
- The material is not suitable for dry or medium dry consistence concrete (wet soil)
- The material is not adequate to be mixed in silos.
- All the given compressive strength values are based on tests on site with the assigned amount of water; cured and tested according to UNE standards.

### PACKAGING AND STORAGE

25 litre sacks on wood pallets: 98 sacks per pallet

1 year storage in its original packaging, away from extreme weather conditions and humidity.

### TECHNICAL DATA

|                                                        |                                                     |
|--------------------------------------------------------|-----------------------------------------------------|
| Density in bags (UNE EN 13055-1)                       | aprox. 650 Kg/m <sup>3</sup>                        |
| Density in yield                                       | aprox. 650 Kg/m <sup>3</sup>                        |
| Application time (at 20°C)                             | 60 minutes                                          |
| Application temperature                                | From +5°C to +35°C                                  |
| Can be transited                                       | after 24 hours of its placement                     |
| 28 days compression resistance (UNE IN 13892-2)<br>**  | 7,0 MPa - N/mm <sup>2</sup> (70kg/cm <sup>2</sup> ) |
| Certificated thermal conductivity (UNE IN 12667) **    | λ=0,19 W/mK                                         |
| Calculation conductivity thermal (UNE IN ISO 10456) ** | λ=0,20 W/mK                                         |

# LIGHTWEIGHT RESTORATION

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|                                            |                                                                  |
|--------------------------------------------|------------------------------------------------------------------|
| Water vapour resistance (UNE IN ISO 10456) | $\mu=5$ (humid area)                                             |
| vapour waterproof (UNI 10351)              | $\delta=27,6 \cdot 10^{-12}$ kg/msPa                             |
| Specific thermal capacity                  | $C_p=1000$ (J/kgK)                                               |
| Fire Reaction (UNE IN 13501)               | Euroclasse A1 <sub>fl</sub> (Incombustible)                      |
| Minimum thickness                          | 5 cm                                                             |
| Efficiency * / **                          | Aprox. 0,42 sacks/m <sup>2</sup> and 1 cm thickness (25 L sacks) |
| Packaging                                  | 25 litre bags on wood pallets: 98 sacks/pallets                  |
| CE stamp                                   | EN 13813 CT-C7-F1                                                |

\* (According to compression grade)

\*\* (Mixed with concrete mixers or planetary mixer)

### 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.

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