

# OSMOGROUT

Osmotic cement mortar for both direct and indirect pressure waterproofing of masonry and concrete structures indoors and outdoors



## DESCRIPTION

OSMOGROUT is a grey premixed powder consisting of cement and inerts of selected particle size and organic additives. Mixed with water it creates a fluid mortar which can be applied with a smooth steel trowel or brush, characterised by total impermeability to water both in direct and indirect pressure and high adhesion to the substrate.

## ADVANTAGES

- Suitable for indoors and outdoors.
- Quick and easy application.

## PACKAGING

25 kg sacks. 1400 kg standard pallet

## INTENDED USE

Osmotic cement coating specific for waterproofing structures and objects in temporary or permanent contact with water. It is used to waterproof tanks, lift shafts, reservoirs, channels, underground walls, foundations, walls inside and outside basements, humid rooms, swimming pools. It is also suitable to protect concrete elements exposed to the action of disintegrating salts.

## PREPARATION OF THE SUBSTRATES

The surfaces to be waterproofed must be clean and solid. Loose or detaching parts, dust, traces of oil release agents, laitance, varnish, paint and salt efflorescence must be removed by sandblasting, mechanical brushing or with a pressure washer. Cement plaster must be perfectly adherent. Cracks or splits in the substrate must be repaired with suitable repair mortars. Before application, the substrate must be wet with water until saturation without the water stagnating on the surface. Use compressed air or a sponge to accelerate removal of excess water. Make specific cove bases near the corners using suitable cement mortars such as LITOPLAN SMART. Uneven surfaces must be levelled with specific cement mortars at least 14 days before applying OSMOGROUT verifying that the substrate is sufficiently cured.

## PRELIMINARY CHECKS

**Site conditions:** Verify that the conditions of temperature, humidity, lighting, etc. at the time of product application are adequate.

**Use and storage of the material:** Verify that the product is suitable for the intended use by consulting the relevant technical data sheet and is properly stored.

## MIXING PROPORTION

OSMOGROUT: 25 kg (1 Sack)

WATER: 6.5 litres (26%)

## PREPARING THE MIXTURE

Pour a suitable amount of water into a clean container and slowly add the powder, mixing with an electric drill fitted with a propeller mixer until you get a mix that is smooth and without lumps. Let the mix rest for at least 5 minutes and mix again for a few seconds. The amount of water can vary slightly according to the application (smooth trowel or brush).

## APPLICATION

Apply the mortar with a smooth steel trowel or brush directly onto the substrate in two consecutive coats so that it is no less than 1.5 mm thick. The second coat must be applied when the first is sufficiently dry (approximately 5-6 hours depending on absorption of the substrate) and anyway within 24 hours to guarantee perfect adhesion between the two layers. Have the mortar penetrate very well into the substrate, paying special attention to cover the corners and cove bases. The two coats must not be thicker than 4 mm.

## STACKING MATERIALS

- After the layer of OSMOGROUT has dried, the mosaics, ceramic material or natural stones can be applied directly on the wall using high performance cementitious adhesives with normal setting of class C2, quick-hardening of class C2F or reactive compounds of class R2 according to EN 12004 depending on the size of the tiles, intended use or the type of natural stone. For floors, the layer of OSMOGROUT must be protected by a cement screed based on LITOCEM or LITOCEM PRONTO at least 4-5 cm thick.
- After the layer of OSMOGROUT has dried, improved adhesion cement plasters and/or mortars can be applied for final regularisation of the surface.
- After the layer of OSMOGROUT has dried, in structures subject to possible hairline cracks and concerned by direct and indirect water pressure, flexible waterproofing membranes can be applied such as ELASTOCEM or COVERFLEX to further improve sealing and durability of the work.



### WARNINGS

- Do not add lime or cement to the product.
- Apply the product at a temperature between +5°C and +35°C
- Due to its characteristics, the product can only be used for rigid waterproofing.
- The coating of OSMOGROUT cannot be subject to any type of traffic. Protect floors with a screed based on LITOCHEM or LITOCHEM PRONTO at least 4-5 cm thick.
- Do not apply the product on bituminous membranes or on wood, plastic, metal or rubber substrates, plasterboard panels, gypsum and scagliola based plasters.
- Do not use on flexible substrates, on terraces and balconies and non-structural basements.
- In hot or windy climates, we recommend spraying water on the surface to avoid quick evaporation of the water in the mixture.
- After application, protect the surfaces from rain, water and freezing for at least 48 hours

- Do not use the product for applications not stated in this technical data sheet.

### INFORMATION ON SAFETY

Refer to the product's safety sheets available upon request.  
PRODUCT FOR PROFESSIONAL USE

### SPECIFICATIONS

Waterproofing elements in concrete or cement-based plasters is carried out with osmotic mortar based on amorphous colloidal silica such as Litokol S.p.A.'s OSMOGROUT. The substrate must be clean, cured, compact and non-deformable. Treatment is applied by brush or with a smooth steel trowel from a minimum of 1.5 mm to a maximum of 4 mm thick.

### IDENTIFICATION DATA

Appearance	Powder
Colour	Grey
Solid residue	100%
Preservation time	12 months inside the original packaging, in a dry place

### APPLICATION DATA

Mixing proportion	Water = 26% (6.5 litres of water for a 25 kg sack)
Ageing time of the mix	5 minutes
Consistency of the mix	Paintable fluid mortar
Apparent volumetric mass of fresh mortar	1800 kg/m <sup>3</sup>
Mixture life	Approximately 60 minutes
Application	Smooth steel trowel or brush
Application temperatures allowed	from +5°C to +35°C
Applicable thickness	Minimum = 1.5 mm – Maximum per coat = 2.5 mm – Maximum in two coats = 4 mm
Waiting time before applying second coat	After 5-6 hours and not beyond 24 hours
Commissioning	7 days
Temperature of use	from -30°C to +70°C
Cleaning the equipment	With water on fresh product. Mechanically on hardened product.
Consumption	1.6 kg/m <sup>2</sup> per mm of thickness.




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**PERFORMANCE**

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**Resistance to bending after 28 days**  $\geq 7.5 \text{ N/mm}^2$

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**Resistance to compression after 28 days**  $\geq 25 \text{ N/mm}^2$

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**Adhesion to concrete after 28 days**  $\geq 2.0 \text{ N/mm}^2$

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**Water absorption coefficient by capillarity "Cm"**  $0.0 \text{ kg}/(\text{m}^2 \text{ min}^{0.5})$

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Depth of water penetration undergoing pressure of 5 atmospheres for 72 hours

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**DIRECT PRESSURE** Maximum penetration depth: 0 mm  
Average penetration depth: 0 mm NO PENETRATION

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**INDIRECT PRESSURE** Maximum penetration depth: 0 mm  
Average penetration depth: 0 mm

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Although the information in this technical data sheet is the result of our best experience, it is merely indicative.  
Each specific case must be subjected to practical preliminary tests by the user who undertakes the responsibility for the final work result.

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