

LITOPLAN SMART



CEMENT-BASED THIXOTROPIC LEVELLING LAYER FEATURING RAPID HARDENING AND DRYING FOR VERTICAL AND HORIZONTAL APPLICATIONS FOR INDOORS AND OUTDOORS WITH THICKNESS RANGING FROM 1 TO 25 mm. PRODUCT WITH VERY LOW EMISSION OF VOLATILE ORGANIC COMPOUNDS.



DESCRIPTION

Premixed cement-based levelling layer in grey powder created with quick drying and setting hydraulic binders, inert silica of selected particle size and organic additives. The product is characterised by the following requirements:

- Compliant with the CT - C16 - F5 class according to the EN 13813 standard.
- Blended with 20% water (5 litres per 25 kg sack) gives a thixotropic mixture that can be easily applied on vertical substrates without running. Increasing the amount of water to the mix by 24% (6 litres per 25 kg sack) you get a plastic mortar with a consistency suitable for floor applications.
- Extended processing of the mix (about 60 minutes) allows easy application on large surfaces.
- Development of high mechanical resistance to bending and compression just 4 hours after application.
- Able to get a smooth surface finish using a sponge trowel lightly moistened with water. The task must be performed when the applied product has begun bonding and has sufficiently hardened.
- Excellent adhesion to traditional cement substrates, lightweight panels, wooden panels.
- Compensated shrinkage.

FIELDS OF APPLICATION

Suitable for levelling vertical and horizontal surfaces in interiors and outdoors with thickness ranging from 1 to 25 mm with a single coat. Typical examples of application involve:

- Smoothing cement-based screeds in interiors and outdoors treated with LITOCEM or LITOCEM PRONTO.
- Levelling cement-based screeds on balconies and terraces to create slopes.
- Regularization of the walls and floors of concrete cast in tubs and swimming pools.
- Smoothing heating screeds.
- Smoothing slabs or concrete walls.
- Smoothing cement-based plaster.
- Surface smoothing that has residue from old adhesives used for ceramic tiles.
- The levelling of surfaces made with old tiles, marble tiles or natural stone.
- Restoring or levelling steps, edges of pillars, front of the balconies and terraces, dips or holes that may exist in the flooring.

PACKAGING

25 kg sacks. - Standard pallet 1,500 kg

PREPARATION OF THE SUBSTRATES

The substrates must be clean, dry, solid, compact, seasoned enough, without loose parts and without rising damp. Any cracks or crevices should be repaired with DECOR PRIMER FONDO by sprinkling the surface still fresh with sand or dry grain size quartz 0.4 - 1 mm.

Substrates that are too porous and absorbent media or superficially powdery, should be treated with PRIMER C.

Smooth and compact substrates such as smoothed concrete, old ceramic or marble tiles, must be treated with the adhesion promoter primer LITOFIX after having suitably degreased the surface with specific alkaline detergents.

Anhydrite screeds should be lightly sanded and treated with PRIMER C.

MIXING PROPORTIONS

LITOPLAN SMART – 25 kg (1 sack)

WATER – 5 litres (20%) thixotropic mix – 6 litres (24%) plastic mix

PREPARING THE MIXTURE

In a clean container, pour a suitable amount of water depending on the application, and slowly add the powder by mixing with an electric drill fitted with a propeller mixer until you get a mix that is smooth and free of lumps. Let the mix rest for 5 minutes and briefly stir for a few seconds. The duration of the mix is about 60 minutes at a temperature of +23°C, so it is recommended that you mix only the amount of product you can use in this period of time. Do not use an amount of water that exceeds that recommended in order to avoid product shrinkage during ageing and a reduction in the final mechanical properties. Do not put water in the mix once it starts to bind.

APPLICATION

The mix is applied directly on the substrate using a metal spatula, creating the desired thickness. The mix must be pressed onto the substrate in order to facilitate adhesion. If high thickness on extended surfaces is required, we recommend creating level strips with LITOPLAN SMART and then carrying out the levelling with a metal levelling bar dragging it along the strips. For a smoother surface finish, use a sponge trowel when the product starts binding and has sufficiently hardened.

A smoothing coat can be performed about 3 hours after the first coat.

The subsequent laying of ceramics or natural stone can be carried out after about 4-6 hours. In the case of parquet or resilient materials, after 24 hours. These waiting times are influenced by environmental temperature and humidity.

If the laying involves parquet, it is necessary that the minimum thickness of LITOPLAN SMART is not less than 3 mm and that the residual moisture is a maximum of 2% measured with a carbide hygrometer.

SUITABLE ADHESIVES FOR LAYING

Laying ceramic material, mosaics or natural stones can be performed with traditional cement-based adhesives, reactive or in aqueous dispersion. The choice of the most suitable adhesive must be made according to the intended use and the size of the material to be applied. Laying parquet can be performed by using two-component reactive adhesive such as LITOPAR P2.

COMPATIBLE WATERPROOFING LINING

Waterproofing the layer created with LITOPLAN SMART can be done before laying ceramic materials using traditional two-component cement-based lining such as ELASTOCEM or COVERFLEX or ready-to-use products in aqueous dispersion such as HIDROFLEX or polyurethane-type LITOCOAT.

WARNINGS

- Do not add lime or cement to the product.
- Do not apply on substrates with rising damp.
- Do not use on gypsum-board, chalk-based plaster and masonry in autoclaved cellular concrete blocks.

- Use the right amount of water for the mix. Excessive amounts of water lead to a lengthening of the hardening time, the possible formation of cracks and detachments, surfaces that are powdery or not consistent.
- The duration of the mix is about 60 minutes at a temperature of +23°C. We recommend only mixing the amount of product you can use within this period of time.
- In hot climates, store the product in a cool place and protected from the sun before use.
- Apply the product with a temperature range between +5°C and +35°C.
- Protect from direct sunlight or from strong air currents for the first 12 hours after application.
- In the case of laying parquet, create a thickness of at least 3 mm.

- In the case of wooden substrates or substrates subject to bending and vibrations, mix LITOPLAN with LATEXKOL to completely replace water until you get the desired consistency.
- Do not use the product for applications not found in this technical sheet.

INFORMATION ON SAFETY

Refer to the product's safety sheets available upon request.

PRODUCT FOR PROFESSIONAL USE.

APPLICATION DATA

Mixing proportions	Water = 20% (5 litres per 25 kg sack) to obtain a thixotropic mixture suitable for vertical applications. Water = 24% (6 litres per 25 kg sack) to obtain a plastic mixture suitable for horizontal applications.
Ageing time of the mix	5 minutes
Consistency of the mix	Thixotropic - Plastic
Duration of the mix	About 60 hours at a temperature of +23°C
Admitted application temperatures	From +5°C to +35°C
Applicable thickness	From 1 to 25 mm per coat
Consumption	1.6 kg/m ² for each mm of thickness
Can be stepped on	After about 3 hours drying at a temperature of +23°C
Waiting time for bonding	Ceramic or natural stone: 4-6 hours – Parquet, textile and resilient materials: 24 hours

IDENTIFICATION DATA

Appearance	Powder
Colour	Grey
Custom classification	3824 5090
Storage time	12 months inside the original packaging, in a dry place

PERFORMANCE

Emission of volatile organic compounds (VOC)	EC1-R plus GEV-Emicode
Adhesion to concrete after 28 days (EN 13892-8)	≥ 1 N/mm ²
Resistance to compression after 28 days (EN13892-2)	≥ 16 N/mm ²
Resistance to bending after 28 days (EN 13892-2)	≥ 5 N/mm ²
EN 13813 Conformity	CT – C16 – F5

SPECIFICATIONS

The regularisation of vertical and horizontal substrates, both indoors and outdoors, in varying thickness between 1 and 25 mm must be carried out with quick class CT-C16-F5 levelling layer according to the EN 13813 standard such as LITOPLAN SMART produced by Litokol S.p.A. suitable for the subsequent laying of ceramics and natural stone after 4-6 hours and flooring in parquet, textiles and resilient, after 24 hours. Apply the product with a smooth spatula onto the previously treated substrate, cleaned and dimensionally stable refining with a sponge trowel.

Although the information in this technical chart is from 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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