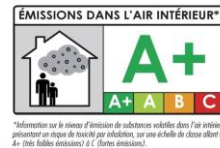




LITOKOL K17-LITOKOL K18

CEMENTITIOUS ADHESIVES FOR LAYING CERAMIC TILES INDOORS AND OUTDOORS



DESCRIPTION

Grey (K17) or white (K18) powder adhesive based on Portland cement, inert fillers of selected particle size and organic additives.

ADVANTAGES

- Product with low volatile organic chemical emissions (VOC) classified EC1-RPLUS (EMICODE) and A+ (French Regulation)

EN 12004 CLASSIFICATION

Litokol K17 and Litokol K18 are C1 Class, normal cement-based adhesives for the laying of ceramic tiles on floors and walls in interiors and exteriors. The products comply with the harmonised

EN 12004 standard reported in the CPR-IT003-G and CPR-IT003-B Performance Declarations as per the European Construction Products Regulation (No. 305/2011/EU) and tested by a European body notified as per certification system 3.

PACKAGING

25 kg bags - Pallet 80x120 kg.1200

INTENDED USE

Litokol K17 and Litokol K18 can be used for laying any type of ceramic tiles (excluding thin slabs) in the following places.

Interior floors in residential and public/commercial buildings (pedestrian areas)

Substrates	Longest allowable tile side (cm)
Cement-based or Litocem/Litocem Pronto-based screeds without heating	≤ 30
Sulphate-based (anhydrite) screeds without heating (1)	≤ 30

Interior walls in residential, public/commercial and industrial buildings

Substrates	Longest allowable tile side (cm)
Lime/cement-based render	≤ 60
Gypsum-based render (1)	≤ 60
Fibre cement and cement-based panels	≤ 30
Elements in autoclaved aerated concrete (2)	≤ 60

Exterior floors in residential, public/commercial and industrial buildings

Substrates	Longest allowable tile side (cm)
Cement-based or Litocem/Litocem Pronto-based screeds	≤ 30

Legend

- (1) After treatment with Primer C or Primer X94. Maximum humidity = 0.5%
(2) After applying plaster.



USE WITH LATEXKOL

By mixing Litokol K17 or Litokol K18 with Latexkol (30%) elasticising latex as a substitute for water, the adhesive and deformability characteristics are increased, fulfilling class C2S2 (improved cementitious highly deformable adhesive) according to EN 12004, making the adhesives suitable for the following applications:

- Laying on structures with in-situ concrete cast or precast.
- Laying on underfloor heating.
- Laying of large-format tiles.
- Laying on top of old tiles, marble-chip tiles or stones

INSTALLATION PLANNING

The only way to guarantee the long-lasting performance of ceramic installations is to properly plan the process. We, therefore, recommend that national regulations currently in force in each country be carefully read, for example UNI 11493:2013 for Italy, which provides all necessary instructions regarding the choice of materials, correct planning, use and installation, so as to ensure all quality, performance and durability standards are safely met.

Some of the general precautions that need to be followed are listed below.

Substrates - Before installation, check that the substrates are clean, free of loose fragments, properly dried and cured, flat and level, and that mechanical resistance requirements based on the intended tiling use have been met.

Worksite conditions - Check the suitability of temperature, humidity, light conditions etc. at the time of the product's application.

Materials - Check that all materials used for tiling (ceramic materials, levelling systems, adhesives, grouts, waterproofing products, etc.) are suitable for the intended use and have been correctly stored.

Expansion joints - Check that elastic perimeter seals, expansion joints, divider and structural joints have been properly designed and prepared. Divider joints are normally needed for 20/25 m² sections in interiors and 9-12 m² in exteriors. For exteriors, make sure joints are properly waterproofed and sealed.

Back buttering - For exterior installations, large tiles, floors with intense or heavy traffic, vibrating supports and situations exposed to high temperature fluctuations, the adhesive mortar must be applied to both the substrate and the back of the tiles so as to obtain a full layer of adhesive without any air pockets.

Joints - In any type of ceramic tiling, suitably sized joints must be created based on the following parameters:

- type, format and size tolerance of tiles;
- thermal expansion coefficients of the materials being used;
- mechanical properties of installation materials;
- position and trajectory of joints;
- mechanical properties of substrate;
- environment of use and expected operating conditions.

Closed joints **are not allowed**. Any plastic spacers must be removed before grouting.

MIX RATIO

LITOKOL K17/K18: 25 kg. (1 bag) – **WATER** 6 l (24%) – **LATEXKOL** 7.5 l (30%)

PREPARING THE MIX

Pour the right quantity of water or LATEXKOL into a clean container and slowly add the powder, stirring with an electric drill fitted with a mixing paddle until a smooth and consistent mix is obtained without any lumps. Leave the mix to settle for about 5 minutes and then briefly mix again for a few seconds.

APPLICATION

Spread the mix onto the substrate using the smooth part of the trowel to create a layer approximately 1 mm thick. Immediately afterwards, comb the product onto the surface using the notched part of the trowel. The trowel notch size will depend on the size of the tiles. In any case, consider that 65-70% of the reverse side of tiles needs to be covered for interior installations, and 100% for exterior installations or floors subject to intense traffic. In exterior installations or areas subject to high stress, it is recommended to also apply the adhesive to the back of the tiles (back-buttering method).

The tiles must be laid on the adhesive and firmly pressed to ensure good contact. The adhesive's open time in conditions of normal temperature and humidity is 20 minutes. In very warm or windy climates, or in the case of particularly absorbent substrates, the open time may be drastically reduced to just a few minutes. It is, therefore, recommended to regularly check that the adhesive has not skinned over. In this case, the surface of the adhesive will need to be combed again using the trowel. The joints between laid tiles must be of a suitable width. Take account of any expansion, perimeter, control or structural joints. The tiled surface must be protected for at least 24 hours against any water infiltration, and for approximately 5-7 days against any frost and direct sunlight.

GROUTING

Joints can be grouted after approximately 6-8 hours in the case of wall tiles and after 24 hours in the case of floor tiles. For grouting, use the cement-based grouts **Litochrom 0-2**, **Litochrom 1-6**, and **Litochrom 3-15** or the ready-to-use, water-based polyurethane grout **Starlike® Monomix**.

In the case of acid-resistant floors or with very high mechanical resistance, it is advisable to use the two-component, acid-resistant, epoxy mortars **Epoxystuk X90** or **Starlike®**.

WARNINGS

- Do not add lime, cement or other foreign materials to the product.
- Apply the product at temperatures between +5°C and +35°C.
- Always respect the mix ratio.
- Do not apply the product to plastic, elastic, wooden, metal materials or resin-treated surfaces.
- Do not use the product to lay thin slabs.
- Do not use the product to create layers more than 5 mm thick.
- Do not use the product on floors that need to quickly set for light foot traffic.
- Do not use the product for applications not stated in this technical sheet.



• If in doubt, contact the Litokol S.p.A technical help service.

SAFETY INFORMATION

Consult the Material Safety Data Sheet, available on request.

PRODUCT FOR PROFESSIONAL USE

ITEM SPECIFICATION

Ceramic wall and floor tiles will be laid using a normal cementitious adhesive with Class C1 compliant with EN 12004 standard, such as Litokol K17 or Litokol K18 by Litokol S.p.A..

IDENTIFICATION DATA

Appearance	Powder
Colour	Litokol K17: grey – Litokol K18: white
Customs code	38245090
Solid residue	100%
Preservation time	12 months in original packaging in a dry place.

APPLICATION DATA

Mix ratio	Water = 24% (6 litres of water per 25 kg bag) Latexkol = 30% (7.5 litres of water per 25 kg bag)
Consistency of mix	Creamy mortar
Mix curing time	5 minutes
pH of mix	13
Specific gravity of mix	1.5
Life of mixture	Approx. 8 hours
Application	Notched trowel
Application temperatures allowed	From +5°C to +35°C
Ready for grouting	Wall: 6 - 8 hours - Floor: 24 hours
Set to light foot traffic	24 hours
Ready for use	7 days
Temperature of use	From -30°C to +80°C
How to clean equipment	With water when product is fresh. Mechanically when product has hardened.
Consumption	8 mm trowel: 3 kg/m ² 10 mm trowel: 3.5 kg/m ² Back-buttering: 5 kg/m ²

PERFORMANCE

Initial tensile adhesion strength after 28 days	≥ 0,5 N/mm ²	
Tensile adhesion strength after water immersion	≥ 0,5 N/mm ²	EN 1348
Tensile adhesion strength after heat action	≥ 0,5 N/mm ²	
Tensile adhesion strength after freeze/thaw cycles	≥ 0,5 N/mm ²	
Open time	≥ 0,5 N/mm ² after 20 minutes	EN 1346
Resistance to alkalis	Excellent	
Resistance to solvents	Excellent	
Resistance to acids	Poor	



Although the information provided in this technical data sheet represents the best of our knowledge and experience, it is intended purely as a guideline. The user must carry out preliminary practical tests for each specific job and is solely responsible for the final result.

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