



CEMENTKOL K21 – CEMENTKOL K22

CEMENTITIOUS ADHESIVE FOR CERAMIC TILES



DESCRIPTION

Grey (K21) or white (K22) powder adhesive based on Portland cement, inert fillers of selected particle size and organic additives.

PACKAGING

25 kg bags - Standard pallet 1500 kg

5 kg bags – boxes of 5 Standard pallet 900 kg

CLASSIFICATION EN 12004

CEMENTKOL K21 + 26 - 28% WATER Class C1

CEMENTKOL K22 + 26 - 28% WATER Class C1

Normal cementitious adhesive

CEMENTKOL K21 + 30% LATEXKOL Class C2 – S2

CEMENTKOL K22 + 30% LATEXKOL Class C2 – S2

Highly-deformable enhanced cementitious adhesive

FIELDS OF APPLICATION

Suitable for fixing any kind of ceramic tile to floors or walls in interiors or exteriors.

See application chart

SUBSTRATES *Pre-treated with PRIMER X94 or PRIMER C.	MINIMUM CURING TIME	MAXIMUM RESIDUAL MOISTURE CONTENT	GENERAL CONDITIONS
Cement-based screeds	28 days	3%	Clean Solid and compact Free from cracks Flat and level Sufficiently cured
LITOCEM screeds	24 hours	3%	
Anhydride screeds*	-	< 0,5%	
Concrete	6 months	-	
Cement-based plaster	1 week per cm thickness	-	
Gypsum based plaster*	-	< 0,5%	

EXPANSION JOINTS

Movement joints have the function of interrupting the continuity of the tiled surface, thereby compensating for dimensional changes and deformations affecting the tiles, adhesive and substrate. The joints must always extend through both the bedding layer and the tiles.

RECOMMENDED SPACING	INTERIORS	EXTERIORS
	Squares from 6x6 m to 10x10 m	Squares from 3x3 m to 5x5
WIDTH OF JOINTS	Floors: ≥ 6 mm Walls: 6 mm (never < 3 mm)	Squares 3x3: 10 mm Squares 5x5: 12-13 mm
SUITABLE SEALING PRODUCTS	PVC, aluminium or steel strips depending on expected traffic. Silicone sealants.	Silicone sealants.

USE OF LATEXKOL

The adhesive must be mixed with LATEXKOL elasticized latex in the following cases: cast or prefabricated concrete structures, heated floors, asphalt substrates, large-format tiles, exterior cladding, swimming pools.

MIXING RATIOS

CEMENTKOL K21 - 25 kg (1 bag) / CEMENTKOL K22 - 25 kg (1 bag)		
WATER-LATEXKOL 1:1 7,50 kg (30%)	WATER 6,5 - 7 L (26 - 28%)	LATEXKOL 7,50 kg (30%)

MIX PREPARATION

Put the correct quantity of water into a clean container and slowly add the powder. Mix with an electric drill equipped with mixing paddle until a uniform, lump-free mix is obtained. Leave the mix to rest for at least 5 minutes then re-mix briefly for a few seconds.

APPLICATION

Spread the mix onto the substrate using the smooth part of the trowel to create a layer of about 1 mm thickness. Immediately afterwards comb the surface of the product using the notched part of the trowel. The trowel notch size must be chosen according to the size of the tiles. In any case it must assure 65-70% coverage of the back of the tiles for interior installation and 100% for exterior installation or floors subject to intense traffic. In exterior installations or areas subject to high stress, it is advisable to apply the adhesive additionally to the back of the tiles (back-buttering method).

LAYING THE TILES

Place the tiles on the adhesive and press firmly to assure good contact. The product's open time in normal conditions of

temperature and humidity is 20 minutes. However, this may be reduced to just a few minutes in very hot or windy weather. It is advisable to check frequently that the adhesive has not skinned over. If it has, comb the surface of the adhesive again using the notched trowel. Tiles must be laid with grout joints of adequate width for their size. Butt-jointing (tiles touching) is not recommended. Take account of expansion or control joints during installation. Leave a space of at least 5 mm in the vicinity of walls or vertical elements. The tiled surface must be protected for at least 24 hours from water and for about 5-7 days from frost and direct sunlight.

GROUTING

The joints between tiles can be grouted after about 6-8 hours in the case of wall tiles or 24 hours in the case of floor tiles. Grouting can be carried out using cement-based grouts LITOCHROM 0-2, LITOCHROM 1-6, LITOCHROM 3-15, LITOCHROM FLEX 3-10.

In the case of acid-resistant floors, we recommend using two-part epoxy grout EPOXYSTUK X90 or LITOCHROM STARLIKE®.

WARNINGS

- Do not add lime or cement to the product.
- Apply the product at temperatures of between +5°C and +35°C.
- Do not use the product for applications not stated on this technical sheet.
- For a correct choice, refer to the guide chart on the technical sheet.

APPLICATION DATA

Mixing ratios	Water = 26 - 28% (6,5 - 7 L per 25 kg bag) Water\ LATEXKOL (1:1) = 30% (7.50 kg per 25 kg bag) LATEXKOL = 30% (7,50 kg per 25 kg bag)		
Maturing time	5 minutes		
Mix consistency	Very creamy		
Pot life	Over 8 hours		
Application temperature	From +5°C to +35°C		
Open time (EN 1346)	≥ 0.5 N/mm ² after 30 minutes		
Maximum applicable thickness	5 mm		
Adjustability time	About 40 minutes		
Consumption	Tile size (cm)	Recommended trowel size (mm)	Consumption (kg/m²)
	10 x 10 15 x 15	6	2,5
	15 x 20 25 x 25	6 - 8	2,5 - 3
	25x33 33x33	8 - 10	3,5 - 4
	30x45 45x45	10 back-buttering	4,5 - 5
	50 x 50 60x60	10 back-buttering	5
	LARGER	10 back-buttering	> 5
Walk on time	24 hours		
Ready for use	14 days		
Ready for grouting	Floor: about 24 hours - Wall: about 6-8 hours		

IDENTIFICATION DATA

Appearance	Powder
Colour	Cementkol K21: grey - Cementkol K22: white
Classification to EN 12004	Cementkol K21/K22 + water: C1 Cementkol K21/K22 + water/LATEXKOL (1:1): C2-S1 Cementkol K21/K22 + LATEXKOL: C2-S2
Customs code	3824 5090
Shelf life	12 months in original packaging in dry place

PERFORMANCE

	Cementkol K21 / Cementkol K22 26 + 28% water	Cementkol K21 / Cementkol K22 + 30% LATEXKOL
Bonding strength after 28 days (EN 1348)	≥ 0,5 N/mm ²	≥ 1 N/mm ²
Bonding strength after immersion in water (EN 1348)	≥ 0,5 N/mm ²	≥ 1 N/mm ²
Bonding strength after action of heat (EN 1348)	≥ 0,5 N/mm ²	≥ 1 N/mm ²
Bonding strength after freeze-thaw cycles (EN 1348)	≥ 0,5 N/mm ²	≥ 1 N/mm ²
Transverse deformation (EN 12002)	No	≥ 5 mm (class S2)
Temperature of use	From – 30°C to +90°C	
Resistance to acids	No	
Resistance to alkalis	Good	

SAFETY INFORMATION

Consult the Material Safety Data Sheet, available on request.

PRODUCT FOR PROFESSIONAL USE.

APPLICATION CHART

SUBSTRATES	SIZES (cm)	Mosaic 1 x 1 5 x 5	10x10 15x15	15x20 25x25	25x33 33x33	30x45 45x45	50x50 60x60	OVER
INTERIOR FLOORS	JOINTS (mm)	1,5 - 3	1 - 4	2 - 6	3 - 7	4 - 10	6 - 12	10 - 16
Cured floating or separated cement-based screeds			●	●	●	●	●	●
Dry anhydride screeds sandpapered and treated with PRIMER C or PRIMER X94			●	●	●	●	●	●
Existing concrete floors (cleaned and degreased)			●	●	●	●	●	●
Ceramic tile, stone or agglomerate floors (cleaned and degreased)			●	●	●	●	●	●
Heated cement-based screeds after pre-heating cycle			●	●	●	●	●	●
Surfaces treated with HIDROFLEX			●	●	●	●	●	●
Concrete structures cured for at least 6 months			●	●	●	●	●	●
Metal or wood surfaces. Existing PVC, rubber or linoleum floors								
INTERIOR WALLS	JOINTS (mm)	1,5 - 3	1 - 4	2 - 6	3 - 7	4 - 10	6 - 12	10 - 16
Cement-based plaster on cured masonry			●	●	●	●	●	●
Dry plaster or gypsum panels treated with PRIMER C or PRIMER X94			●	●	●	●	●	●
Cured light block masonry			●	●	●	●	●	●
Existing solid ceramic walls (cleaned and degreased)			●	●	●	●	●	●
Gypsum board sandpapered and treated with PRIMER C or PRIMER X94			●	●	●	●	●	●
Surfaces treated with HIDROFLEX			●	●	●	●	●	●
Cast or prefabricated concrete structures cured for at least 6 months			●	●	●	●	●	●
Metal or wood surfaces								
EXTERIOR FLOORS	JOINTS (mm)	1,5 - 3	3 - 6	5 - 8	7 - 10	10 - 12	12 - 14	> 14
Cured floating or separated cement-based screeds			●	●	●	●	●	●
Existing concrete, ceramic tile or stone floors			●	●	●	●	●	●
Concrete structures cured for at least 6 months			●	●	●	●	●	●
Surfaces treated with ELASTOCEM			●	●	●	●	●	●
EXTERIOR WALLS	JOINTS (mm)	1,5 - 3	3 - 6	5 - 8	7 - 10	10 - 12	12 - 14	> 14
Cement-based plaster on cured masonry			●	●	●	●	●	●
Cast or prefabricated concrete structures cured for at least 6 months			●	●	●	●	●	●
Surfaces treated with ELASTOCEM			●	●	●	●	●	●

KEY

- Application possible with Cementkol K21/K22 + 26 - 28% water
- Application possible with Cementkol K21/K22 + 30% Latexkol diluted 1:1 with water
- Application possible with Cementkol K21/K22 + 30% Latexkol

Although the information provided on this technical 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..

Sheet no. 002

Revision no. 3

Date: March 2012

LITOKOL S.p.A.

Via G. Falcone, 13/1 42048 Rubiera (RE) Italy
Tel. +39 0522 622811 Fax +39 0522 620150
www.litokol.it email: info@litokol.it

COMPANY WITH QUALITY MANAGEMENT
SYSTEM CERTIFIED BY DNV
= ISO 9001:2008 =