

EpoxyÉlite EVO

Acid-resistant two-part epoxy mortar for the installation and grouting of ceramic tiles and mosaics with 1 to 15 mm joints, on indoor and outdoor floors and walls. Product with ultra-low emission of volatile organic substances (VOC).



RG
EN 13888

R2T
Conforme alla norma
EN 12004

CE
EN 12004

GREEN CODE
EC1
VERY LOW EMISSION

ÉMISSIONS DANS L'AIR INTÉRIEUR
A+
A+ A B C



DESCRIPTION

Two-part anti-acid epoxy mortar. Part A consists of a mixture of epoxy resin, fine-grain siliceous aggregates, pigments and specific organic additives. Component B consists of an innovative organic catalyst. The two parts, once mixed together, form a creamy mixture with excellent smoothness, also for no-drip vertical application. Once hardened, the product has ultra-high performance in terms of mechanical and chemical resistance.

ADVANTAGES

- Depending on the grain size of the siliceous aggregates, it is possible to obtain a particularly smooth and compact grout with a high aesthetic impact and minimum staining.
- Colour range including traditional shades that are attuned to the current trends of the ceramic sector.
- Suitable for indoor and outdoor floor and wall applications, even in harsh operating conditions, in residential, commercial and industrial settings.
- Product with high resistance to mechanical stress and chemical substances and no water absorption.
- Product with ultra-low emission of volatile organic substances. Compliant with EC1^{PLUS} classes, according to the EMICODE protocol and Class A+, pursuant to French Regulations.
- Product not subject to restrictions for road, sea, air and rail transport.

EN 13888 CLASSIFICATION

EpoxyÉlite EVO: Class RG Reactive grout sealant

EN 12004 CLASSIFICATION

EpoxyÉlite EVO is a R2T Class high-performance reactive no-drip adhesive for interior and exterior floor and wall ceramic tiling. Its compliance with harmonized standard EN 12004 is reported on the CPR-IT324 Declaration of Performance, pursuant to the European Regulation for construction products (CPR - Construction Products Regulation No.: 305/2011/EU) and tested by a European body notified as per certification system 3.

PACKAGING

5 kg plastic bucket (A+B) - 500 kg pallet

10 kg plastic bucket (A+B) - 440 kg pallet

FIELDS OF APPLICATION

Suitable for the acid-resistant installation and grouting of ceramic tiles and mosaics with 1 to 15 mm wide joints, on indoor and outdoor floors and walls. Suitable for applications where the surfaces are exposed to aggressive chemical substances (see Chemical Resistance Table) such as dairies, abattoirs, pubs, food factories in general. Suitable for applications subject to heavy-duty operating conditions, such as swimming pools, hammams, whirlpools, heavy-traffic floors, and tiles exposed to extreme temperature variances. Typical applications include:

- Grouting of ceramic tiles and mosaics on wooden kitchen tops;
- Bonding and grouting of ceramic tiles and mosaics in swimming pools, including surfaces waterproofed with Elastocem, Coverflex or Aquamaster;
- Grouting of ceramic tiles, mosaics and natural stones installed on metal surfaces for the construction of prefabricated bathrooms;
- Grouting of ceramic tiles, thin reinforced slabs, mosaics, natural stones or resin agglomerates installed on heated floors;

- Grouting of glass or ceramic mosaic joints installed on structures and templates of extruded polystyrene panels used in Turkish baths, hammams and wellness centres;
- Grouting of ceramic tiles, porcelain tiles and thin slabs, including large slabs with or without reinforced back, installed on external façades;
- Also recommended for grouting swimming pools or pools containing spring water.

PRELIMINARY CHECKS AND JOINT PREPARATION

Make sure that the ceramic tiles can be cleaned easily and their surface is not absorbent. In fact, some types of tiles (e.g., polished porcelain tiles) or natural stones feature micro-porosities and surface roughness that can cause surface staining and make cleaning very difficult. In these cases, it is advisable to perform a spot test and, in any case, avoid using sealants with contrasting or very dark colours. Check that the adhesive or mortar used for bonding the tiles is completely hardened and dry. The joints must be clean and free from dust and any debris. Any traces of adhesive or mortar flowing between joints and plastic spacers must be removed.

MIX RATIO

Part A: 93.7 parts by weight

Part B: 6.3 parts by weight

The two parts are pre-batched in their respective packaging.

MIX PREPARATION

Pour component B (catalyst) onto component A (paste). We recommend pouring all the catalyst contained in the bag. Mix preferably with the help of a drill mixer to obtain a smooth, lump-free mix. Hand mixing is not recommended. The two parts are pre-batched in their packaging, avoiding, this way, all risk of mixing errors.

TILED SURFACE GROUTING

Apply the paste in the joints using a green rubber float (item 946GR), removing any excess product. For large surfaces, it is possible to use a single electric brush equipped with an abrasion-resistant rubber trowel. The product's working life and hardening time is strongly dependent on the ambient temperature. The optimum application temperature is between +18°C and +23°C. Under these conditions, the product is soft, easily workable and with a working life of approximately 1 hour. It is ready for foot traffic after 24 hours. The surface can be commissioned after 7 days at a temperature of +23°C. At temperatures between +8°C and +12°C, the product is highly consistent and difficult to apply. The hardening time is also lengthened considerably. Do not add water or solvents to improve workability. In hot weather it is advisable to apply the product to the floor as quickly as possible so as not to shorten further the working life due to the reaction heat in the container. In particular, this requirement applies to 10 kg packs.

CLEANING AND FINISHING

The grout work must be cleaned and finished while the product is still wet and, in any case, in the shortest possible time. Take care not to remove product from the joints or leave stains on the tile surface. This operation can be performed either manually or by using a special electric single brush with felt.

MANUAL METHOD

First sprinkle clean water over the grouted surface. Perform an initial cleaning with a trowel equipped with a damp white felt (item 109 GBNC) to remove excess product, making circular movements clockwise and anticlockwise, in order to perfectly seal the sides of the tiles and to remove any excess sealant from the tile surface. Complete a second cleaning cycle with a sweepex sponge (item 128G0001) for smooth and gap-free grout, completely removing the product from the tiles, making sure that you do not remove any grout from the joints, and drying any excess water. For easier cleaning operation, we recommend using two bucketfuls of water, one for rinsing felt and sponge and to collect any dirty water, and the other to use clean water for the final surface cleaning.

When felt and sponge are impregnated with resin and can no longer be used, they must be replaced.

Any product residue left behind on the surface of ceramics can be removed using Litonet and Litonet Gel detergents after about 24 hours and in any case once the grout has hardened.

METHOD WITH SINGLE BRUSH

After removing any excess grout from the surface, sprinkle plenty of clean water over the grouted surface. Then start cleaning with the single brush equipped with felt. Remove and collect the water-sealant emulsion from the floor with a rubber rake. Replace the felt disc when it is fully impregnated with product.

USE AS ADHESIVE

Apply the paste onto the substrate using a notched trowel with suitably sized teeth and lay the tiles exerting strong pressure. In the case of floors subject to heavy traffic or swimming pools, apply the tiles with the back-buttering method, in order not to leave gaps between substrate and tile.

WARNINGS

- Preferably apply the product at temperatures between +18°C and +23°C.
- Do not apply the product under high humidity conditions, in order to prevent superficial carbonatation phenomena.
- Avoid contact of dust or polluting materials from concomitant processes with grout that has not yet hardened.
- Quickly remove excess product from the tile surface because once hardened, it will have to be removed mechanically, seriously jeopardising the final result.
- The product cannot be used for grouting Tuscan terracotta.
- Some types of tiles (e.g., polished porcelain tiles) or natural stones feature micro-porosities and surface roughness that can cause surface staining and make cleaning very difficult. In these cases, it is advisable to perform a spot test and, in any case, avoid using sealants with contrasting or very dark colours.
- The product must not be used for grouting tanks containing aggressive substances with which only occasional contact is permitted (see Chemical Resistance Table).
- Do not mix the product with water or solvents.
- Do not use the product for applications not stated in this technical sheet.

SAFETY INFORMATION

Consult the product safety data sheets, available on request.

PRODUCT FOR PROFESSIONAL USE.

ITEM SPECIFICATION

The acid-resistant installation and grouting of ceramic tiles and mosaics with 1 to 15 mm wide joints must be carried out with a two-part coloured epoxy RG class mortar, pursuant to EN 13888 and R2T class, according to standard EN 12004 EpoxyElite EVO, produced by Litokol S.p.A.

IDENTIFICATION DATA

Appearance	Component A: thick paste Component B: liquid
Colours	100 Bianco Assoluto
	110 Grigio Perla
	125 Grigio Cemento
	140 Nero Grafite
	205 Travertino
	210 Greige
	225 Tabacco
	230 Cacao
Classification according to EN 13888	RG - reactive grout sealant
Classification as per EN 12004	R2T - Improved high-performance reactive no-drip adhesive
Customs code	35069190
Shelf life	24 months, in original packaging. Avoid freezing.



APPLICATION DATA

Waiting time for grouting	Floor installation with standard setting adhesive: 24 hours Floor installation with quick setting adhesive: 4 hours Cladding installation with standard setting adhesive: 6-8 hours Cladding installation with quick setting adhesive: 4 hours
Mixing ratios	Part A: 93.7 parts by weight Part B: 6.3 parts by weight The two parts are pre-batched in their respective packaging.
Mix consistency	Thixotropic paste
Specific gravity of mix	1.6 kg/L
Mix pot life	About 1 hour at T = +23°C
Allowed application temperatures	From +10°C to +30°C
Recommended application temperatures	From +18°C to +23°C
Walk-on time	About 24 hours at T = +23°C
Ready for use	7 days at T = +23°C
Joint width	From 1 to 15 mm

Consumption	EPOXY MORTAR		
	Size (cm)	Joint width (mm)	Consumption (kg/m²)
	MOSAICS 1.0X1.0X0.4 1.5X1.5X0.4 1.5X1.5X0.6 1.5X1.5X0.8 1.5X1.5X1.0 2.3X2.3X0.4 2.3X2.3X0.6 2.3X2.3X0.8	2	1.4 1.2 1.8 2.4 2.7 0.85 1.3 1.7
	CKLINKER 12x24x1.2 25x25x1.2	5-8-10	1.16-1.86-2.33 0.74-1.19-1.49
	10 x 10 x 0.6 15 x 15 x 0.6	3-4-6	0.56-0.74-1.12 0.37-0.50-0.74
	15 x 20 x 0.6 25 x 25 x 1.2	3-4-6-8	0.33-0.43-0.65-0.87 0.45-0.60-0.89-1.19
	25 x 33 x 0.8 33 x 33 x 1	4-8-10	0.35-0.70-0.87 0.38-0.75-0.94
	30 x 45 x 1 45 x 45 x 1.2	4-10	0.34-0.86 0.33-0.83
	50 x 50 x 1.2 60 x 60 x 1.2	6-10	0.45-0.74 0.37-0.62
	ADHESIVE		
Trowel notch (mm)		Consumption (kg/m²)	
2		1.1	
3.5		1.6	
8		3	
10		3.5	

PERFORMANCE

Shear adhesion to initial cut	≥ 2 N/mm²	EN 12003
Shear adhesion strength after water immersion	≥ 2 N/mm²	
Shear adhesion after thermal shocks	≥ 2 N/mm²	
Open time	≥ 0,5 N/mm² after 50 minutes	EN 1346
Slip resistance	≤ 0.5 mm	EN 1308
Resistance to abrasion	≤ 250 mm³	EN 12808-2
Flexural strength after 28 days at standard conditions	≥ 30 N/mm²	EN 12808-3
Compression strength after 28 days at standard conditions	≥ 45 N/mm²	EN 12808-3
Shrinkage	≤ 1.5 mm	EN 12808-4
Water absorption after 4 hours	≤ 0,1 g	EN 12808-5
Temperature of use	From – 20°C to +100°C	
Chemical resistance	See Table	

CHEMICAL RESISTANCE TABLE

(The Table is a summary of the chemical resistance tests performed pursuant to Regulation UNI EN 12808-1)

CHEMICAL RESISTANCE OF CERAMIC SURFACE GROUTED WITH EPOXYÉLITE EVO - DESTINATION ENVIRONMENT: INDUSTRIAL FLOORING

Group	Name	Conc. %	CONTINUOUS USE				INTERMITTENT USE
			24 hours	7 days	14 days	28 days	
Acids	Acetic Acid	2.5	●	●	●	●	●
		5	●	●	●	●	●
	Hydrochloric Acid	37	●	●*	●*	●*	●
	Citric Acid	10	●	●	●	●	●
	Lactic Acid	2.5	●	●	●	●	●
		5	●	●	●	●	●
		10	●	●	●	●	●
	Nitric Acid	25	●	●	●	●*	●
		50	●	●	●	●	●
	Oleic Acid	-	●	●	●	●	●
	Sulphuric Acid	1.5	●	●	●	●	●
		50	●	●	●	●	●
		96	●	●	●	●	●
	Tartaric Acid	10	●	●	●	●	●
Alkalis	Ammonia in solution	25	●	●	●	●	●
	Caustic Soda	50	●	●	●	●	●
	Sodium Hypochlorite Conc. Active Cl	10	●	●	●	●	●
	Potassium hydroxide	50	●	●	●	●	●
	Solutions saturated at 20°C		●	●	●	●	●
Oils and fuels	Calcium Chloride		●	●	●	●	●
	Sodium Chloride		●	●	●	●	●
	Sugar		●	●	●	●	●
	Lead-free gasoline		●	●	●	●	●
	Diesel		●	●	●	●*	●
Enzymatic cleaners	Extra Virgin Olive Oil		●	●	●	●	●
	Lube Oil		●	●	●	●	●
	Cleaner 1 at 4%		●	●	●	●*	●
Solvents	Cleaner 2 at 5%		●	●	●	●	●
	Acetone		●	●	●	●	●
	Ethylene Glycol		●	●	●	●	●
	Ethyl alcohol		●*	●*	●*	●*	●*
	Hydrogen Peroxide	10 vol	●	●	●	●	●
		25 vol	●	●	●	●	●

KEY

● RESISTANT ●* RESISTANT WITH POSSIBLE COLOUR ALTERATION ● NON-RESISTANT

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

Data sheet no. 324
Revision no. 0
Date: January 2019

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

AZIENDA CON SISTEMA
DI GESTIONE QUALITÀ
CERTIFICATO DA DNV GL
= ISO 9001 =

www.litokol.it