Epobinder

Fluid epoxy system for construction joints, grouting on concrete, synthetic mortars and finishings.

Epobinder is compliant with the performance requirements of standard EN 1504-4 for structural bonding and standard EN 1504-6 for anchoring products.

Rating 4

GREENBUILDING RATING
REF. GBR DATA REPORT 10.23
APPROVED

- ✓ Regional Mineral ≥ 30%
- ✓ VOC Low Emission
- ✓ Solvent ≤ 5 g/kg
- × Low Ecological Impact
- ✓ Health Care

1. Excellent workability
2. For the execution of construction joints
3. To make epoxy finishings and screeds
4. Ideal to seal cracks in mineral or cement-based screeds
5. Can be applied with airless pump

kerakoll

Areas of application

→ Intended use:
- Additional construction joints on the extrados of horizontal structures for the strengthening of beams and pillars.
- Creation of waterproof rigid joints between hardened and fresh concrete.
- Precision fastening and structural anchoring of metal elements on concrete.
- Adhesion promoter for mortars on metal surfaces, in combination with a dusting of quartz.
- Horizontal and vertical surfaces applications.
- Sealing of cracks in cement-based screeds.
- Structural bonding of steel plates (beton plaqué) and grouting of bars with elements in reinforced concrete.
- Creation of synthetic mortars and finishings on concrete in combination with Quarzo 1.7.

Instructions for use

→ Preparation of substrates
Before applying Epobinder it is necessary to:
- clean the surface from dust, oil and grease;
- remove loose debris or flaky parts that are not perfectly anchored until a clean, highly cohesive substrate is obtained;
- the substrate must be dry in order not to compromise the adhesion of the system. Slight humidity is tolerated.

→ Preparation
Epobinder is prepared by mixing component A with component B (preset ratio 4:1 in the packagings) with a low-rev, mechanical stirring device (< 500 r./min.), until a uniform light grey liquid is obtained. Workability times may vary according to the quantity of the mixed paste and the temperature of the environment and substrate: the higher the temperature or the larger the mixture, the lower the workability time. To obtain a longer workability time in case of high temperatures, it is advisable to cool the components individually before mixing them. Similarly, in case of low temperatures, it is advisable to maintain both components at a temperature of not less than +10 °C, prior to application.

→ Application
Epobinder can be applied with a roller, brush or airless spray.
- For construction joints, mortar or concrete must be cast on the fresh resin before the surface film forms at the start of the polymerisation process.
- For grouting of bars, fill the clean hole previously made with Epobinder and insert the bar with a rotating movement.
- To seal gaps, widen the gap using a sander; remove dust residues with compressed air and pour Epobinder.
- To increase adhesion on metal elements after cleaning and preparing the metal surface itself, apply the product on the contact surface; then sprinkle with rough quartz. Only apply the mortar after the resin has hardened.
- To prepare epoxy finishings: mix with Quarzo 1.7 until a mixture of appropriate consistency is obtained (approximately 1 part Epobinder and 2 parts Quarzo 1.7); apply wet-on-wet only after having primed the area with the same product.
- To prepare epoxy screeds: mix with Quarzo 1.7 until a mixture of appropriate consistency is obtained (approximately 1 part Epobinder and 4 parts Quarzo 1.7); apply wet-on-wet only after having primed the area with the same product.

→ Cleaning
Residual traces of Epobinder can be removed from tools with solvents before the product hardens.

Certificates and marks

CE EN 1504-4 · CE EN 1504-6 · S-P-11329 EPD environdec.com · GEV-EMICODE EC 1 PLUS very low emission · ÉMISSIONS DANS L'AIR INTÉRIEUR A+ (A+ A B C)

** Émission dans l'air intérieur Information sur le niveau d'émission de substances volatiles dans l'air intérieur, présentant un risque de toxicité par inhalation, sur une échelle de classe allant de A+ (très faibles émissions) à C (fortes émissions).*

Abstract

Supply and laying of a fluid, epoxy system, such as Epobinder by Kerakoll, for construction joints, grouting on concrete, synthetic mortars and finishings, to be applied with a roller, brush or airless spray. GreenBuilding Rating 4, CE-marked and compliant with the performance requirements of Standard EN 1504-4 for structural bonding and standard EN 1504-6 for anchoring; according to principles as defined by standard EN 1504-9.
Supply and laying of a synthetic mortar or finishing such as Epobinder with Quarzo 1.7 by Kerakoll, for repairing of concrete floors and expansion joints. To be applied with a spreader. GreenBuilding Rating 4.

Technical Data compliant with Kerakoll Quality Standard		
Appearance	part A grey liquid, part B beige liquid	
Volumetric mass	part A 1550 kg/m³ – part B 980 kg/m³	
Shelf life	≈ 12 months from production in the original sealed packaging	
Warning	protect from frost, avoid direct exposure to sunlight and sources of heat	
Pack	monopack part A 2.4 kg + part B 0.6 kg part A bucket 7 kg, part B bucket 1.75 kg	
Mixing ratio	part A : part B = 4 : 1	
Viscosity of the mixture	≈ 1180 mPas (rotor 3 RPM 20)	Brookfield method
Density of the mixture	≈ 1490 kg/m³	
Pot life (1 kg):		
- at +10 °C	≈ 110 min.	EN ISO 9514
- at +21 °C	≈ 75 min	EN ISO 9514
- at +30 °C	≈ 40 min.	EN ISO 9514
Open time:		
- at +10 °C	≈ 150 min	EN 12189
- at +21 °C	≈ 120 min.	EN 12189
- at +30 °C	≈ 90 min.	EN 12189
Temperature range for application	from +5 °C to +35 °C	
Coverage:		
- construction joints on rough substrates	≈ 0.7 – 1 kg/m²	
- construction joints on irregular substrates	≈ 1 – 2 kg/m²	
- bonding of prefabricated elements	≈ 1.6 kg/m² per mm of thickness	
- sealing of cracks	≈ 1,6 kg/dm³	
- synthetic finishing (1:2 = Epobinder:Quarzo 1.7)	≈ 0.67 kg/m² per mm of thickness	
- synthetic screed (1:4 = Epobinder:Quarzo 1.7)	≈ 0.38 kg/m² per mm of thickness	

Values taken at +23 °C, 50% R.H. and no ventilation. Data may vary depending on specific conditions at the building site.

Performance

VOC Indoor Air Quality (IAQ) - Volatile organic compound emissions

Conformity	EC 1 plus GEV-Emicode	GEV certified 17486/11.01.02

HIGH-TECH

Performance characteristic	Test Method	Requirements of standard EN 1504-4		Performance Epobinder		
Compressive strength:	EN 12190	≥ 30 N/mm²		24 hrs	2 days	3 days
- pure			N/mm²	> 60	> 62	> 70
- synthetic finishing (1 : 2)			N/mm²	> 70	> 80	> 85
- synthetic screed (1 : 4)			N/mm²	> 48	> 54	> 56
Adhesion/bond strength	EN 12636	Adhesion to dry concrete		value exceeded		
Sensitivity to water	EN 12636	Adhesion to damp concrete		value exceeded		
Shear strength	EN 12615	≥ 6 N/mm²		> 16 N/mm²		
Linear shrinkage	EN 12617-1	≤ 0.1%		< 0.1%		
Workability at +23 °C	EN ISO 9514	measured with ≈ 0.5 kg of product	–	75 min.		
Glass transition temperature	EN 12614	> +40 °C		+60 °C		
Secant elastic modulus under compression	EN 13412	≥ 2000 N/mm²		3200 N/mm²		
Coefficient of thermal expansion	EN 1770	measured between -25 °C and +60 °C	≤ $100x10^{-6}$ K^{-1}	< $60x10^{-6}$ K^{-1}		
Durability (resistance to freeze/thaw cycles)	EN 13733	compression shear strength > tensile strength of the concrete	no collapse in steel/adhesive/ steel test specimens	value exceeded		
Reaction to fire	EN 13501-1			Euroclass E		

	Test Method	Requirements of EN 1504-6	Performance Epobinder
pull-out strength of steel rebars (movement in mm in relation to a 75 kN load)	EN 1881	≤ 0.6 mm	0.37 mm
creep under load (movement in mm under a continuous load of 50 kN after 3 months)	EN 1544	≤ 0.6 mm	0.46 mm
Glass transition temperature	EN 12614	≥ +45 °C	+60 °C

Warning

→ Product for professional use
→ abide by any standards and national regulations
→ use at temperatures between +5 °C and +35 °C
→ apply on dry substrates
→ do not apply on dirty or loose surfaces
→ protect surrounding surfaces from accidental smearing and staining, which would be difficult to remove
→ clean tools immediately after use with solvents (ethyl alcohol, toluene, xylene)
→ always use protective gloves and eyewear both during mixing and during application
→ avoid any contact with the skin
→ if necessary, ask for the safety data sheet
→ for any other issues, contact the Kerakoll Worldwide Global Service +39 0536 811 516 - globalservice@kerakoll.com

Kerakoll Spa
via dell'Artigianato 9
41049 Sassuolo - MO

+39 0536.816.511
info@kerakoll.com

www.kerakoll.com