Code: E786 2026/11 EN

Geolite 40

Mineral geo-mortar with geo-binder base for monolithic repair of reinforced concrete. Thixotropic, semi-rapid setting 40 min.



Geolite 40 is a thixotropic geo-mortar for passivating, repairing, finishing and protecting structures in reinforced concrete, anchoring and fixing metal elements. Specific for operations involving mobile platforms, low temperatures and where the result must be ready for use quickly.

1. **Thixotropic, class R4**
2. **Semi-rapid setting 40 min**
3. **Thicknesses from 2 to 40 mm in a single coat**
4. **Based on geo-binder**
5. **For naturally stable, monolithic repairs**
6. **Modular setting times**
7. **Waterproof**
8. **Paintable after 4 hours**

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Areas of application

→ Intended use:
- Passivation, localised and generalised repair, finishing and monolithic protection of reinforced concrete structures of any nature and size
- Specific for medium or large size operations, fast execution of work with same-day delivery
- Rapid, precision fastening and structural anchoring of sub-plates, tie-rods, bars, plates, machinery on reinforced concrete

Instructions for use

→ Preparation of substrates
Before applying Geolite 40 it is necessary to:
- restore the concrete substrate and roughen it by mechanical scarification or hydro-demolition to a depth of ≥ 5 mm, equivalent to level 8 of the Test kit for preparation of reinforced concrete and masonry substrates, thoroughly removing all weakened concrete;
- remove the rust from the reinforcing bars, which must be cleaned by brushing (manual or mechanical) or sandblasting;
- clean the treated substrate using compressed air or a high pressure washer;
- saturate with water until the substrate is saturated yet with no excess water on the surface. Alternatively on horizontal concrete surfaces, apply Primer Uni on a dry substrate in order to ensure regular absorption and promote the natural crystallisation of the geo-mortar.

Check that the resistance class of the supporting concrete is suitable.
In case of thick patched layers and on large surface areas, provide a reinforcing welded mesh anchored to the substrate.

→ Preparation
Prepare Geolite 40 by mixing 25 kg of powder with the amount of water indicated on the packaging (we advise using the whole bag).
Bearing in mind the fact that the mortar hardens quickly, the mixture can be prepared in:
- a mixer, mixing until a smooth, lump-free mortar is obtained;
- a suitable mixing pump;
- a mortar mixer or drill-type mixing device with a low-rev agitator.

→ Application
- In localised/generalised restoration work in which Geolite 40 is applied in thicknesses from 2 mm to 40 mm (maximum per layer), apply the mortar by hand using a trowel or mortar spray machine (bearing in mind the fact that the geo-mortar hardens very quickly).
- To make a protective finishing, Geolite 40 can be applied manually (with a steel spreader) or by machine in a minimum thickness of 2 mm, after first roughening the surfaces to a depth of 1-2 mm.
- For grouting of bars, fill the hole previously made with Geolite 40 by extruding the material with a special gun and insert the bar with a rotating movement.

Allow the surfaces to cure for at least 24 hrs.

→ Cleaning
Residual traces of Geolite 40 can be removed from tools and machines using water before the product hardens.

Certificates and marks

When properly emptied, the packaging is recyclable as paper (up to 80 per cent) according to the ATICELCA® 501 method

** 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 certified, thixotropic, semi-rapid-setting (40 min.) mineral geo-mortar, based on geo-binder,with very low petrochemical polymer content and free of organic fibres, specific for the passivation, repair, finishing and guaranteed, long-lasting, monolithic protection of concrete structures and grouting of bars, such as Geolite 40 by Kerakoll Spa. Specific for the localised or generalised centimetre-thick monolithic repair of damaged or deteriorated sections of reinforced concrete and simultaneous treatment of reinforcing bars and millimetre-thick protective finishing of surfaces by application with a trowel, after adequate preparation and wetting of the substrates until fully saturated. CE-marked and compliant with the performance requirements of standards EN 1504-7 for the passivation of reinforcing bars, EN 1504-3, Class R4, CC and PCC type, for volumetric reconstruction and finishing, EN 1504-2 for the protection of surfaces and EN 1504-6 for the anchoring with swelling effect of steel reinforcement bars; according to principles 2, 3, 4, 5, 7, 8 and 11 as defined by standard EN 1504-9.

Technical Data compliant with Kerakoll Quality Standard		
Appearance	powder	
Apparent volumetric mass	≈ 1320 kg/m³	UEAtc
Aggregate mineral content	silicate - carbonate	
Grading	0 – 0.5 mm	EN 12192-1
Shelf life	≈ 12 months from production in the original sealed packaging, protect from humidity	
Pack	25 / 15 / 5 kg bags	
Mixing water	≈ 4.6 l / 1 25 kg bag – ≈ 2.8 l / 1 15 kg bag – ≈ 0.9 l / 1 5 kg bag	
Flow of the mixture	160 – 180 mm	EN 13395-1
Density of the mixture	≈ 2010 kg/m³	
pH of the mixture	≥ 12.5	
Start/End of setting	≈ 35 – 40 min. (≈ 180 – 195 min. a +5 °C) – (≈ 25 – 30 min. at +30 °C)	
Temperature range for application	from +5 °C to +40 °C	
Minimum thickness	2 mm	
Maximum thickness per layer	40 mm	
Coverage	≈ 17 kg/m² per cm of thickness	

Values taken at +21 °C, 60% 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 3541/11.01.02
HIGH-TECH			
Performance characteristic	**Test Method**	**Requirements of standard EN 1504-7**	**Performance**
Corrosion protection	EN 15183	no corrosion	value exceeded
Shear adhesion	EN 15184	≥ 80% of the value of the uncovered bar	value exceeded
	Test Method	**Requirements of standard EN 1504-3, class R4**	**Performance in CC and PCC conditions**
Compressive strength (N/mm²):	EN 12190		
- 4 hrs			> 6
- 24 hrs			> 20
- 7 days			> 35
- 28 days		≥ 45	> 45
Flexural tensile strength (N/mm²):	EN 196-1	None	
- 4 hrs			> 2
- 24 hrs			> 5
- 7 days			> 6
- 28 days			> 9
Adhesive bond	EN 1542	≥ 2 N/mm² (28 days)	> 2 N/mm² (28 days)
Resistance to carbonation	EN 13295	d_k ≤ reference concrete [MC (0.45)]	value exceeded
Modulus of elasticity under compression:	EN 13412	≥ 20 GPa (28 days)	
- in CC			22 GPa
- in PCC			20 GPa
Thermal compatibility with freeze/thaw cycles with de-icing salts	EN 13687-1	bond strength after 50 cycles ≥ 2 N/mm²	> 2 N/mm²
Capillary absorption	EN 13057	≤ 0.5 kg·m^{-2}·h$^{-0,5}$	< 0.5 kg·m^{-2}·h$^{-0,5}$
Chloride ion content (determined on the product in powder form)	EN 1015-17	≤ 0.05%	< 0.05%
Reaction to fire	EN 13501-1	Euroclass	A1

	Test Method	Requirements of standard EN 1504-2 (C)	Performance
Permeability to water vapour	EN ISO 7783-2	Reference class	class I: SD < 5 m
Capillary absorption and water permeability	EN 1062-3	$w < 0.1\ kg \cdot m^{-2} \cdot hrs^{-0.5}$	$w < 0.1\ kg \cdot m^{-2} \cdot hrs^{-0.5}$
Bond strength by pull off	EN 1542	≥ 2 N/mm²	> 2 N/mm²
Linear shrinkage	EN 12617-1	≤ 0.3%	< 0.3%
Thermal expansion coefficient	EN 1770	$\alpha_T \leq 30 \cdot 10^{-6} \cdot k^{-1}$	$\alpha_T < 30 \cdot 10^{-6} \cdot k^{-1}$
Adhesion following thermal shock	EN 13687-2	≥ 2 N/mm²	> 2 N/mm²
Resistance to impact	EN ISO 6272-1	Reference class	Class III : ≥ 20 Nm
Hazardous substances		compliant with point 5.4	
	Test Method	**Requirements of standard EN 1504-6**	**Performance**
Pull-out strength of steel rebars (movement in mm in relation to a 75 kN load)	EN 1881	≤ 0.6 mm	< 0.6 mm
Chloride ion content (determined on the product in powder form)	EN 1015-17	≤ 0.05%	< 0.05%
Hazardous substances		compliant with point 5.4	
Aggregate performance characteristic	**Test Method**	**Requirements of standard UNI 8520-22**	**Aggregate performance**
Alkali-aggregates reaction	UNI 11504	reactivity class	NR (non-reactive)

Warning

→ Abide by any standards and national regulations
→ store the product away from any sources of humidity and out of direct sunlight
→ use at temperatures between +5 °C and +40 °C
→ do not add binders or additives to the mixture
→ do not apply to dirty, loose and flaking surfaces
→ do not apply on gypsum, metal or wood
→ following application, protect from direct sunlight and wind
→ allow the product to cure during the first 24 hours
→ if necessary, ask for the safety data sheet
→ for any other issues, contact Kerakoll Technical Customer Service: + 39 0536.811.516 www.kerakoll.com/contatti

Kerakoll Quality System ISO 9001 CERTIFIED IT10/0327
Kerakoll Quality System ISO 45001 CERTIFIED 18586-I

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Kerakoll Spa
via dell'Artigianato 9
41049 Sassuolo - MO

+39 0536.816.511
info@kerakoll.com

www.kerakoll.com