

GeoLite® Asfalto

S-P-01089 EPD®
 environdec.com

Certified, eco-friendly mineral geo-mortar with a crystalline reaction geo-binder base, in black, specific for road applications. Ideal for use in GreenBuilding. Very low petrochemical polymer content, free from organic fibres. Thixotropic rapid setting 20 min

GeoLite® Asfalto is a geo-mortar ideal for those applications that must be ready for use quickly, to restore industrial and airport flooring, pavements and to anchor and fix traps and drains, manholes, fences, sign posts, safety barriers.



GREENBUILDING RATING®

GeoLite® Asfalto

- Category: Inorganic mineral products
- Repair and reinforcement of reinforced concrete and masonry
- Rating: Eco 4

✓	✓	✓	✓	✓	✓
Natural mineral content 63%			CO ₂ /kg emission 239 g	Very low VOC emissions	Can be recycled as inert material

RATING SYSTEM ACCREDITED BY CERTIFICATION BODY SGS

PRODUCT STRENGTHS

- **GEO-BINDER.** Exclusive use of the innovative Kerakoll geo-binder revolutionises mortars used to repair concrete, guaranteeing levels of safety never before achieved and unique eco-friendly performance.
- **MONOLITHIC.** The first geo-mortar that forms a monolithic conglomerate that will consolidate reinforced concrete works.
- **CRYSTALLISING.** The naturally stable, monolithic repairs carried out with GeoLite® crystallise with the concrete to guarantee the durability of a mineral rock.
- **QUICK.** The first geo-mortar that can be driven over just 2 hours after application. Specific for road and street furniture works.

ECO NOTES

- Based on geo-binder
- Very low petrochemical polymer content
- Free from organic fibres
- Formulated with locally-sourced minerals meaning lower greenhouse gas emissions during transport, with low CO₂ emissions
- With very low volatile organic compound emissions
- Can be recycled as mineral inert material, avoiding waste disposal costs and environmental impact

AREAS OF USE

Use
 Applications which must be ready for use quickly even at low temperatures, such as repair of industrial and airport flooring, pavements, drains. Specific for road and street furniture works.
 Fixing and anchoring of tie-rods, plates, machinery, pre-fabricated structures, road traps, manholes, fencing, road signs, protective barriers.
 Ideal for GreenBuilding and Restoration of Modern Architecture.

INSTRUCTIONS FOR USE

Preparation of substrates
 For concrete surfaces: before applying GeoLite® Asfalto restore the concrete surface and roughen it to a depth of ≥ 5 mm, equal to level 9 of the Test Kit for preparation of reinforced concrete and masonry substrates, by mechanical scarification or hydro-demolition, thoroughly removing all weakened concrete; after this all rust must be removed from the reinforcing rods, which must be cleaned by brushing (manual or mechanical) or sandblasting. Then wet the substrate until it is fully saturated yet with no excess water on the surface. As an alternative to wetting with water, application of Geolite® Base guarantees proper absorption and encourages natural crystallisation of the geo-mortar. Before applying GeoLite® Asfalto, check that the resistance class of the supporting concrete is suitable.
For road applications: clean the substrate as described. GeoLite® Asfalto may be laid in side contact with any existing bitumen, but the support must be made of concrete. Considering the instability of road substrates it is recommended that suitable fibers are added for every 25 kg bag of GeoLite® Asfalto to increase ductility. High-thickness patching on large surface areas: a suitable contrasting metallic reinforcement needs to be anchored to the substrate using anchoring pins

* 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).

INSTRUCTIONS FOR USE

Preparation

Prepare GeoLite® Asfalto by mixing 25 kg of powder with the amount of water indicated on the packaging (we advise using the whole bag). To prepare the mixture, empty the product into a bucket and stir with a drill-type mixing device with a low-rev agitator until the mixture is smooth and has no lumps.

Store the product away from any sources of humidity and out of direct sunlight.

Application

For the anchoring of elements in which GeoLite® Asfalto is applied in thicknesses from 10 mm to 60/100 mm (maximum per layer according to the application and the size of the operation), apply the mortar by hand using a trowel.

Allow the surfaces to cure for at least 24 hrs.

Cleaning

Residual traces of GeoLite® Asfalto can be removed from tools and machines using water before the product hardens.

ABSTRACT

Fixing of drains, manholes and street furniture, repair of industrial flooring, with rapid return to normal use, even at low temperatures, by casting of certified, eco-friendly, pourable, rapid setting (20 min.) mineral geo-mortar with a crystalline reaction geo-binder base, extremely low petrochemical polymer content and free from organic fibres, specific for the anchoring of metal elements, such as GeoLite® Asfalto by Kerakoll® Spa, GreenBuilding Rating® Eco 4, that is CE-marked and compliant with the performance requirements of Standard EN 1504-3, Class R4 (volumetric reconstruction and consolidation) and EN 1504-6 (anchoring), according to Principles 3, 4 and 7 as defined by EN 1504-9.

TECHNICAL DATA COMPLIANT WITH KERAKOLL QUALITY STANDARD

Appearance	powder	
Apparent volumetric mass	≈ 1390 kg/m ³	UEAtc
Aggregate mineral content	silicate - carbonate	
Grading	0 – 2.5 mm	EN 12192-1
Shelf life	≈ 6 months in the original packaging in dry environment	
Pack	25 kg bags	
Mixing water	≈ 3.8 ℓ / 1 x 25 kg bag	
Flow of the mixture	150 – 170 mm	EN 13395-1
Density of the mixture	≈ 2180 kg/m ³	
pH of the mixture	≥ 12.5	
Pot life	≈ 30 min. (at +5 °C) / ≈ 25 min. (at +10 °C) / ≈ 15 min. (at +21 °C)	
Start/End of setting	≈ 20 – 30 min. (≈ 35 – 40 min. at +5 °C)	
Temperature range for application	from +5 °C to +40 °C	
Minimum thickness	10 mm	
Maximum thickness	60 – 100 mm (according to the type of work and the size of the operation)	
Coverage	≈ 19 kg/m ² 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

HIGH-TECH

Performance characteristic	Test Method	Requirements of EN 1504-3 class R4	GeoLite® Asfalto Performance in CC and PCC conditions at temperature of:	
			+5 °C	+21 °C
Compressive strength	EN 12190	≥ 45 MPa (28 days)	> 12 MPa (2 hrs)	> 15 MPa (2 hrs)
			> 15 MPa (4 hrs)	> 18 MPa (4 hrs)
			> 30 MPa (24 hrs)	> 35 MPa (24 hrs)
			> 40 MPa (7 days)	> 45 MPa (7 days)
			> 50 MPa (28 days)	> 55 MPa (28 days)
Flexural tensile strength	EN 196/1	None	> 2 MPa (2 hrs)	> 3 MPa (2 hrs)
			> 3 MPa (4 hrs)	> 4 MPa (4 hrs)
			> 5 MPa (24 hrs)	> 7 MPa (24 hrs)
			> 6 MPa (7 days)	> 8 MPa (7 days)
			> 8 MPa (28 days)	> 9 MPa (28 days)
Adhesive bond	EN 1542	≥ 2 MPa (28 days)	> 2 MPa (28 days)	
Resistance to carbonation	EN 13295	depth of carbonation ≤ reference concrete [MC (0.45)]	value exceeded	
Modulus of elasticity under compression	EN 13412	≥ 20 GPa (28 days)	27 GPa in CC - 20 GPa in PCC (28 days)	
Thermal compatibility with freeze/thaw cycles with de-icing salts	EN 13687-1	bond strength after 50 cycles ≥ 2 MPa	> 2 MPa	
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	
Performance characteristic	Test Method	Requirements of standard EN 1504-6	GeoLite® Asfalto Performance	
Pull-out strength of steel rebars (movement in mm in relation to a 75 kN load)	EN 1881	≤ 0,6	< 0,6	
Chloride ion content (Determined on the product in powder form)	EN 1015-17	≤ 0,05%	< 0,05%	
Hazardous substances		compliant with point 5.4		
VOC INDOOR AIR QUALITY (IAQ) - VOLATILE ORGANIC COMPOUND EMISSIONS				
Conformity		EC 1-R plus GEV-Emicode	Cert. GEV 4439/11.01.02	

WARNING

- **Product for professional use**
- abide by any standards and national regulations
- 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 lay on gypsum 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 the Kerakoll Worldwide Global Service +39 0536 811 516 - globalservice@kerakoll.com

The Eco and Bio classifications refer to the GreenBuilding Rating® Manual 2013. This information was last updated in November 2018 (ref. GBR Data Report - 12.18); please note that additions and/or amendments to this information may be made over time by KERAKOLL Spa; for the latest version, see www.kerakoll.com. KERAKOLL Spa shall therefore be liable for the validity, accuracy and updating of information provided only when taken directly from its institutional website. The technical data sheet given here is based on our technical and practical knowledge. As it is not possible for us to directly check the conditions in your building yards and the execution of the work, this information represents general indications that do not bind Kerakoll in any way. Therefore, it is advisable to perform a preliminary test to verify the suitability of the product for your purposes.



KERAKOLL
The GreenBuilding Company

KERAKOLL S.p.a.
Via dell'Artigianato, 9 - 41049 Sassuolo (MO) Italy
Tel +39 0536 816 511 - Fax +39 0536 816 581
info@kerakoll.com - www.kerakoll.com