Keratech® Eco Flex

Certified, extra-rapid hardening, eco-friendly, self-levelling mineral product for the high-performance and high-deformability correction of irregular substrates, ideal for use in GreenBuilding. Low CO_2 emissions and very low volatile organic compound emissions, recyclable as an inert material at the end of its life.

Keratech® Eco Flex develops a high degree of flexibility and dimensional stability, making it ideal to correct deformable substrates, gives superior workability and hardness. A self-levelling product suitable for the subsequent laying of all types of coverings.

GREENBUILDING RATING®

Keratech® Eco Flex
- Category: Inorganic mineral products
- Preparation of the substrates

rating4

Natural mineral content 77%	CO_2/kg emission 130 g	Very low VOC emissions	Can be recycled as inert material

RATING SYSTEM ACCREDITED BY CERTIFICATION BODY SGS

PRODUCT STRENGTHS

- For internal use
- Thickness from 1 to 15 mm
- Approved for marine use
- HDE technology with extended flow
- Suitable for laying ceramic tiles, porcelain tiles, natural stone and resilient materials using adhesives
- Ideal for laying hardwood floors using adhesives
- High dimensional stability and long-lasting performance
- Extra-rapid hardening
- High flexural strength with Advanced Flex Fiber™
- High mechanical resistance

ECO NOTES

- Formulated with locally-sourced minerals meaning lower greenhouse gas emission during transportation
- Contains hypoallergenic cements for added operator safety

AREAS OF USE

Use
Self-levelling adjustment of irregular and uneven substrates, with extra-rapid setting and drying, compensated shrinkage and very low TVOC – Total Volatile Organic Compound. Made with hypoallergenic, low chromate content cements. Thickness from 1 to 15 mm.

Compatible adhesives:
- gel adhesives, mineral adhesives with SAS technology, single and two-component organic adhesives
- reactive-epoxy and polyurethane, single and two-component cement-based adhesives, dispersed in water or solvent solutions

Covering materials:
- porcelain tiles, ceramic tiles, klinker and cotto of all types and formats
- natural stone, recomposed materials, marble
- hardwood floors, PVC, linoleum, rubber in civil, industrial and sports applications, textiles and cork
- resins for residential use
- raised floors

Substrates:
- mineral screeds made with Keracem® Eco Pronto, Keracem® Eco Prontoplus, Rekord® Eco Pronto, Keracem® Eco and Massetto Premix as a binder or pre-mixed
- cement-based screeds
- prefabricated concrete or fresh concrete castings
- timber, plywood and hardwood floors
- residual traces of cement-based adhesives

Flooring for internal use in residential, commercial and industrial applications and on heat-radiant slabs.

Do not use
Do not use in external applications, on highly flexible substrates subject to thermal expansion, or on wet surfaces or substrates subject to continuous moisture rising.

* 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).

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INSTRUCTIONS FOR USE

Preparation of substrates
In general, substrates must be free of dust, oil and grease, free from any moisture rising, with no loose, flaky or imperfectly anchored parts such as residues of cement, lime, paint coatings and adhesives, which must be completely removed. The substrate must be stable, non-deformable, without cracks and have already completed the curing period of hygrometric shrinkage.
Low-absorption surfaces: smooth surfaces with very low absorption or which are completely non-absorbent, such as ceramic tiles, marble floor tiles, epoxy paints, residues of oxidised adhesives and smoothed concrete layers which are compact and properly anchored, must be prepared by applying Keragrip Eco, an eco-friendly adhesion promoter, following the instructions for use. If necessary, also use in advance the mechanical abrasion. Any substances used for surface treatment, such as wax or parting compounds, must be removed mechanically or using specific chemical products.
High-absorption substrates: on substrates which are compact but very absorbent, apply Primer A Eco to reduce and regulate the level of absorption. In the case of absorbent substrates with weak consistency apply Keradur Eco. Respect the indicated waiting time before carrying out correction of the surface with a self-levelling product.

Preparation
Prepare Keratech® Eco Flex in a clean container, first of all pouring in a quantity of water equal to approximately ¾ of the amount required. Gradually add Keratech® Eco Flex to the water in the container, mixing the paste with a low-rev (≈ 400/min.) helicoidal or trapezoidal agitator. Then add more water until a fluid, smooth, lump-free mortar is obtained. For best results, and to mix larger quantities of self-levelling product, a stirring device with vertical blades and slow rotation is recommended. Specific polymers with high-dispersion properties ensure that Keratech® Eco Flex is immediately ready-to-use. The amount of water to be added, indicated on the packaging, is an approximate guide. Keratech® Eco Flex features a high degree of self-levelling capacity. Adding extra water does not improve the workability of the product, and may cause shrinkage in the plastic phase of drying and result in less effective final performance with a reduction in surface hardness, compressive strength and adhesion to the substrate.

Application
Keratech® Eco Flex is generally applied with a smooth spreader or blade. Application with pumps for plasters enables homogeneous levelling of extensive areas of surface in a very short time. It is best to press the spreader on the substrate, to regulate water absorption and ensure maximum adhesion to the support. After that, the thickness can be adjusted as required. Use a roller to remove air bubbles contained in the self-levelling product, due to high absorbency of the substrate and prolonged or high-rev mixing. To achieve more precise thickness adjustment a steel comb may also be useful. If an additional correction layer is required, it must be applied as soon as the previous layer is ready for foot traffic (≈ 2 hrs at +23 °C and 50% R.H.) but after the application of Keragrip Eco single-component, professional, water-based adhesion promoter, following the instructions for use. After this interval it is necessary to wait ≈ 5 days and then apply Keragrip Eco, after which the subsequent applications may be carried out. In the case of low temperatures and high humidity it is advisable to keep the environment ventilated during application and during the hours immediately following application, in order to avoid the formation of condensation on the surface of the self-levelling product during the setting phase. Protect from air currents at actual floor level.

Cleaning
Residual traces of Keratech® Eco Flex can be removed from tools with water before the product hardens.

SPECIAL NOTES

Joints: it is advisable to desolidarise the self-levelling surface around the perimeter, laying the Tapetex Slim compressible tape along the whole perimeter of the room, on the walls and on any other vertical elements protruding from the supporting layer. Large and continuous surface areas need to be fractionized as soon as they can withstand foot traffic so to create areas < 50 m2 with 8 m maximum individual size. All the joints located in the substrate must be respected.
Timber substrates: in the case of timber, plywood panels and hardwood substrates, clean the surface by sanding, vacuum to remove dust and apply Keragrip Eco, the eco-friendly adhesion promoter to a clean supporting surface, following the instructions for use. In the case of large, continuous areas, attach an anti-alkali mesh with 4x5 mm mesh size and apply Keratech® Eco Flex with thicknesses ≤ 5 mm.
High thicknesses: in the case of correction with thicknesses greater than 15 mm (up to 25 - 30 mm), to be performed in one application, add ≈ 30% in weight of clean inert material with assorted granulometry from 0 to 4 mm during mixing of the paste. Before laying the product, apply eco-friendly adhesion promoter Keragrip Eco to improve adhesion to the substrate.
Special substrates: anhydrite screeds must be dry and sanded as specified in the manufacturer's instructions, then prepared with water-based, eco-friendly surface isolation Primer A Eco, following the instructions for use.
Laying hardwood floors: for subsequent laying of hardwood floors, create a smooth finish with thickness ≥ 3 mm.

ABSTRACT

Certified, high performance and deformability correction of substrates with a maximum thickness of 15 mm, carried out using an eco-friendly, extra-rapid, HDE - High Dispersing Effect technology, mineral self-levelling product, compliant with standard EN 13813, class CT - C20 - F7, GreenBuilding Rating® 4, such as Keratech® Eco Flex by Kerakoll Spa, suitable for subsequent laying of ceramics after 12 hours and hardwood floors after 24 hours when applied at +23 °C and 50% R.H. Prepare, clean and make the substrate dimensionally stable first, then apply the product with a smooth spreader. Average coverage: ≈ 1.6 kg/m² per mm of thickness created.

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TECHNICAL DATA COMPLIANT WITH KERAKOLL QUALITY STANDARD

Appearance	pre-mixed, red-brown colour	
Apparent volumetric mass	≈ 1.19 kg/dm³	UEAtc/CSTB 2435
Mineralogical nature of inert material	silicate - crystalline carbonate	
Grading	≈ 0 – 1000 µm	UNI 10111
Shelf life	≈ 6 months in the original packaging in dry environment	
Pack	25 kg bags	
Mixing water	≈ 5.3 ℓ / 1 x 25 kg bag	EN 12706
Specific weight of the mixture	≈ 1.96 kg/dm³	UNI 7121
Pot life	≥ 30 min.	
Self levelling time	≥ 20 min.	CSTB 2893-370
Temperature range for application	from +5 °C to +30 °C	
Maximum thickness	from 1 mm to 15 mm	
Foot traffic	≈ 2 h	
Waiting time before laying:		
- ceramic tiles	≈ 12 h	
- hardwood floors	≈ 24 h	
Coverage	≈ 1.6 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, i.e.temperature, ventilation and absorbency level of the substrate.

PERFORMANCE

VOC INDOOR AIR QUALITY (IAQ) - VOLATILE ORGANIC COMPOUND EMISSIONS		
Conformity	EC 1 plus GEV-Emicode	GEV certified 969/11.01.02
HIGH-TECH		
Adhesion to concrete after 28 days	≥ 1.5 N/mm²	EN 13892-8
Resistance to:		
- compressive after 7 h	≥ 10 N/mm²	EN 13892-2
- compressive after 7 days	≥ 18 N/mm²	EN 13892-2
- compressive strength after 28 days	≥ 20 N/mm²	EN 13892-2
- flexural after 28 days	≥ 7 N/mm²	EN 13892-2
- abrasion after 24 hrs	≤ 150 mm³	EN 12808-2
- parallel strain on laying level after 28 days	≥ 3.5 N/mm²	UNI 10827
Transversal deformation	≥ 2,5 mm	UNI 12002
Surface hardness after 28 days	≥ 45 N/mm²	EN 13892-6
Conformity	CT – C20 – F7	EN 13813

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

WARNING

- **Product for professional use**
- abide by any standards and national regulations
- do not use Keratech® Eco Flex to correct substrate irregularities greater than 15 mm
- low temperatures and high relative humidity lengthen the drying time and can saturate the environment; this may have a negative effect on the quality of the surface of the self-levelling product
- an excessive quantity of water will reduce strength and the drying time
- before laying hardwood floors and resilient materials, check residual moisture with a calcium carbide hygrometer
- protect from direct sunlight and currents of air for the first 12 hrs
- respect the elastic joints present in the substrate
- if necessary, ask for the safety data sheet
- for unstable wooden types, particular substrates and other conditions, please contact the Kerakoll Worldwide Global Service +39 0536 811 516 - globalservice@kerakoll.com

Kerakoll Quality System ISO 9001 CERTIFIED IT10/0327
Kerakoll Quality System ISO 14001 CERTIFIED IT242729/UK
Kerakoll Quality System BS 18001 CERTIFIED IT255412/UK

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