

# 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<sub>2</sub> 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
- Rating: Eco 4

	 Recycled Mineral ≥ 20%	 Recycled Mineral ≥ 20%	 ≤ 250 g/kg	 Low Emission	 Recyclable
	 Natural mineral content 77%		 CO <sub>2</sub> /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 and Keracem® Eco as a binder
- 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.

## INSTRUCTIONS FOR USE

### Preparation of substrates

Substrates must be free from dust, oil and grease, free from any rising damp, with no loose, flaky material. The substrate must be stable, without cracks and have already completed the curing period of hygrometric shrinkage. Smooth substrates with very low absorption or which are completely non-absorbent, such as ceramic tiles, marble floor tiles, epoxy paints, residues of vinyl adhesives and smoothed concrete layers which are compact and properly anchored, must be prepared using mechanical abrasion or by applying Keragrip Eco single-component, water-based adhesion promoter, following the instructions for use. Any substances used for surface treatment, such as wax or parting compounds, must be removed mechanically or using specific chemical products.

Hardwood floors and solid wood floorboards must be smoothed, unanchored or highly deformable wooden substrates must be anchored and treated with Keragrip Eco. On screeds which are compact but very absorbent apply Primer A Eco water-base, eco-friendly surface isolation product, in order to reduce and regulate the level of absorption and to avoid the formation of air bubbles in the self-levelling product. Respect the indicated waiting time before carrying out correction of the surface with a self-levelling product. The side joints must be protected with a suitable deformable band to prevent leakage of material.

### Preparation

Prepare Keratech® Eco Flex in a clean container, first of all pouring in a quantity of water equal to approximately  $\frac{3}{4}$  of the amount required. Gradually add Keratech® Eco Flex to the water in the container, mixing the paste with a suitable low-rev ( $\approx 400$ /min.) electric mixer. Then add more water until a fluid, smooth, lump-free mortar is obtained. Keratech® Eco Flex is immediately ready for use. The amount of water indicated on the packaging is merely an indication. Adding extra water does not improve the workability of the self-levelling product, and may cause shrinkage during 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 plaster pumps allows the user to very quickly achieve a smooth finish for large areas. Use a roller to remove air bubbles contained in the self-levelling product. Application of a further substrate correction layer must be carried out as soon as the previous layer is ready for foot traffic ( $\approx 2$  hrs) by laying Keragrip, an eco-friendly single-component, water-base adhesion promoter, following the instructions for use. After this interval it is necessary to wait  $\approx 5$  days and then apply Keragrip Eco, after which the subsequent applications may be carried out. In the case of low temperatures and high humidity levels it is recommended that the room be kept well aired after application.

### Cleaning

Wash tools with water before the product hardens.

## SPECIAL NOTES

**Joints:** it is advisable to desolidarise the self-levelling surface around the perimeter 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  $< 50 \text{ m}^2$  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  $\leq 5$  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  $\approx 30\%$  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  $\geq 3$  mm.

## TECHNICAL DATA COMPLIANT WITH KERAKOLL QUALITY STANDARD

Appearance	Pre-mixed, red-brown colour	
Apparent volumetric mass	≈ 1.19 kg/dm <sup>3</sup>	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/dm <sup>3</sup>	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/m <sup>2</sup> 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-R plus GEV-Emicode	GEV certified 969/11.01.02
<b>HIGH-TECH</b>		
Adhesion to concrete after 28 days	≥ 1.5 N/mm <sup>2</sup>	EN 13892-8
Resistance to:		
- compressive after 7 h	≥ 10 N/mm <sup>2</sup>	EN 13892-2
- compressive after 7 days	≥ 18 N/mm <sup>2</sup>	EN 13892-2
- compressive strength after 28 days	≥ 20 N/mm <sup>2</sup>	EN 13892-2
- flexural after 28 days	≥ 7 N/mm <sup>2</sup>	EN 13892-2
- abrasion after 24 hrs	≤ 150 mm <sup>3</sup>	EN 12808-2
- parallel strain on laying level after 28 days	≥ 3.5 N/mm <sup>2</sup>	UNI 10827
Transversal deformation	≥ 2.5 mm	UNI 12002
Surface hardness after 28 days	≥ 45 N/mm <sup>2</sup>	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 01527 578000 – info@kerakoll.co.uk

The Eco and Bio classifications refer to the GreenBuilding Rating® Manual 2012. This information was last updated in August 2018 (ref. GBR Data Report - 08.18); please note that additions and/or amendments may be made over time by KERAKOLL SpA, for the latest version, see [www.kerakoll.com](http://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.