

# Kerabuild® Eco Protection

Eco-friendly, elastic, single-component mineral covering for the guaranteed, long-lasting protection and waterproofing of concrete structures and infrastructures, ideal for use in GreenBuilding. With low CO<sub>2</sub> emissions, recyclable as an inert material at the end of its life.

Kerabuild® Eco Protection is a single-component, Nanotech technology, thixotropic covering that complies with the performance requirements of EN 1504-2, surface protection systems (C).



**GREENBUILDING RATING®**

**Kerabuild® Eco Protection**

- Category: Inorganic Mineral Products
- Class: Protective and waterproofing products for concrete
- Rating: Eco 3

	Natural mineral content 74%		CO <sub>2</sub> /kg emission 108 g		Can be recycled as inert material

RATING SYSTEM ACCREDITED BY CERTIFICATION BODY SGS

**PRODUCT STRENGTHS**

- Fine granular texture, two-coat plaster float finish
- Class A3 crack-bridging (EN 1602-7) to protect and waterproof structures with cracks
- Excellent resistance to ageing and to UV rays
- Resistant to environmental attack (EN 206)

**ECO NOTES**

- Formulated with locally-sourced minerals meaning lower greenhouse gas emission during transportation
- Can be recycled as mineral inert material, avoiding waste disposal costs and environmental impact
- Single-component; avoiding the use of plastic cans reduces CO<sub>2</sub> emissions and the need to dispose of special waste

**KERABUILD® REPAIR SYSTEM**

**KERABUILD® REPAIR SYSTEM** comprises a series of repair and consolidation tools, all complying with the Principles set down in EN 1504-9 (Products and systems for the protection and repair of concrete structures: definitions, requirements, quality control and assessment of conformity. General principles for the use of products and systems), formulated according to the structural element involved in the operation and the goals to be achieved. Each of the solutions proposed guarantees a Design Working Life (Vn) of 50 years or of 100 years, as required by Eurocode 0-EN 1990:2002.

By way of example, one way in which concrete can be restored with a guaranteed design working life of 100 years using Kerabuild® Eco Protection is outlined below:

Protection of reinforcement rods	Kerabuild® Eco Steel P	(EN 1504-7)
Concrete restoration	Kerabuild® Eco R4 Tixo	(EN 1504-3, R4)
Protection and finishing	Kerabuild® Eco Protection	(EN 1504-2, C)
	Kerakover Eco Acrilex Primer	
	Kerakover Eco Acrilex Flex	(EN 1504-2, C)

00547Kerabuild® Eco Protection Code: E736 2013/10 EN

## AREAS OF USE

### Use

Surface and waterproofing protection for new and existing concrete structures that are:

- exposed to air (aerial structures)
- in permanent contact with water (hydraulic structures)
- in contact with solutions containing chlorides (parts of structures and road infrastructures in cold climates)
- in coastal areas, in direct contact with sea water (quays, piers, dry docks, etc...) and/or exposed to sea air (buildings and infrastructures up to 2 – 3 km from the coast).
- underground and also in aggressive soil containing sulphates (foundations, perimeter walls, etc....)

## INSTRUCTIONS FOR USE

### Preparation

To prepare Kerabuild® Eco Protection, mix 25 kg of powder (we advise using the whole bag) with 7 litres of water in a bucket using a low-rev drill-type mixing device with agitator or in a spray machine mixer until an even, lump-free mixture forms. Do not allow too much air into the mixture.

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

### Application

Before applying Kerabuild® Eco Protection, roughen the surface of the concrete substrate (to a depth of 1 – 2 mm) by sandblasting. After this, clean the substrate, removing any remaining dust, grease, oil or other contaminants using compressed air or a high pressure washer.

When applying to surfaces repaired with Kerabuild® Eco mortars, or to freshly placed concrete, there is no need to roughen them first.

Before applying Kerabuild® Eco Protection to newly built structures or to patch layers made by casting mortar/ fine/standard-grain concrete into formwork, all traces of oil-based parting compounds must be removed first.

Before applying Kerabuild® Eco Protection, dampen (not saturate) the substrate using water.

Kerabuild® Eco Protection can be applied by hand using a spreader or sprayed using a suitable machine in 1 mm to 3 mm layers. When spraying Kerabuild® Eco Protection, smooth over with a spreader.

For a float finish, a sponge float can be used after 20 – 50 minutes, depending on climatic conditions.

### Cleaning

Residual traces of Kerabuild® Eco Protection can be removed from tools with water.

## ABSTRACT

*Protection of reinforced concrete elements in structures and infrastructures is guaranteed by hand or spray application of a single-component, elastic, eco-friendly mineral coating for guaranteed long-lasting protection and waterproofing of concrete structures and infrastructures, such as Kerabuild® Eco Protection by Kerakoll Spa, bearing the CE mark, with GreenBuilding Rating Eco 3 and compliant with the performance requirements of standard EN 1504-2, coatings (C), of Class A3 (Static Crack-Bridging according to EN 1062-7).*

## TECHNICAL DATA COMPLIANT WITH KERAKOLL QUALITY STANDARD

Appearance	Powder	
Apparent volumetric mass	1330 kg/m <sup>3</sup>	UEAtc
Grading	0 – 500 µm	EN 12192-1
Shelf life	≈ 12 months in the original packaging in dry environment	
Pack	25 kg bags	
Mixing water	≈ 7 l / 1 x 25 kg bag	
Density of the mixture	≈ 1500 kg/m <sup>3</sup>	
Pot life	≥ 1 hr	
Temperature range for application	from +5 °C to +35 °C	
Minimum / maximum thickness	1 mm / 3 mm	
Coverage:		
- application by hand	≈ 1,2 kg/m <sup>2</sup> per mm of thickness	
- application by spraying	≈ 1,5 kg/m <sup>2</sup> per mm 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 1504-2 (C)	Kerabuild® Eco Protection performance
Carbon dioxide permeability	EN 1062-6	$s_D(\text{CO}_2) > 50 \text{ m}$	$s_D(\text{CO}_2) > 50 \text{ m}$
Permeability to water vapour	EN ISO 7783-2	Reference class	class I: $s_D < 5 \text{ m}$
Capillary absorption and water permeability	EN 1062-3	$w < 0,1 \text{ kg}\cdot\text{m}^{-2}\cdot\text{h}^{0,5}$	$w < 0,1 \text{ kg}\cdot\text{m}^{-2}\cdot\text{h}^{0,5}$
Bond strength by pull off	EN 1542	$\geq 0,8 \text{ MPa}$	$> 0,8 \text{ MPa}$
Thermal compatibility with freeze/thaw cycles with de-icing salts	EN 13687-1	$\geq 0,8 \text{ MPa}$	$> 0,8 \text{ MPa}$
Crack-bridging properties	EN 1062-7	method A (static) by class	$0,5 \text{ mm} < \text{class A3} < 1,25 \text{ mm}$
Chloride ion diffusion	UNI 7928	null	null

## WARNING

- **Product for professional use**
- abide by any standards and national regulations
- use at temperatures between +5 °C and +35 °C
- Do not add binders or additives
- protect surfaces from rain and water percolation
- cover scaffolding with canvas sheets until it is dismantled to shield surfaces from driving rain, sun and wind, even after application
- for an even aesthetic effect, paint the coating applied with Kerabuild® Eco Protection using the Kerakover Eco Acrilex Flex cycle
- 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](mailto:globalservice@kerakoll.com)

The Eco and Bio classifications refer to the GreenBuilding Rating® Manual 2013. This information was last updated in September 2013 (ref. GBR Data Report - 10.13); 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](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.

**Kerakoll  
Quality  
System**

ISO 9001  
CERTIFIED

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The GreenBuilding Company

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