

# Metric Protection

Anti-carbonation, elastic, cement-based protective product for concrete.

Metric Protection is a single-component, thixotropic, elastic covering compliant with standard EN 1504-2(C), for the protection of concrete structures.



1. Thixotropic
2. Certified EN 1504-2 (C)
3. For the protection of cracked elements
4. Resistant to environmental aggressions
5. Waterproof
6. Applicable with a machine
7. Two-coat plaster

## Rating 3



- ✓ Regional Mineral  $\geq 60\%$
- × Recycled Regional Mineral  $\geq 30\%$
- ✓ CO<sub>2</sub> Emission  $\leq 250$  g/kg
- × VOC Low Emission
- ✓ Recyclable

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## Areas of application

### → Intended use:

- Protective, waterproofing finishing for concrete surfaces of any nature and size.
- Protection against carbonation of concrete elements of any nature and size.

- Protection of concrete elements with unsuitable concrete cover thickness.
- Protection of concrete elements in sporadic exposure to sea water, sea air and de-icing salts.
- Elastic protection of cracked concrete or concrete subject to deformation.

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## Instructions for use

### → Preparation of substrates

The substrate must be perfectly cured, free from hygro-metric shrinkage, consistent, free of loose or easily removable debris, and free from parting compounds, oil, grease or paint.

The most suitable substrate preparing methods are sandblasting, shot peening or washing using pressurised water.

When working on weakened parts, when parts of the substrate are missing or in the case of honeycombs, the substrate must be properly prepared with a mineral mortar from the Geolite o Metric range.

### → Preparation

Prepare Metric Protection by mixing the powder using the amount of water indicated on the packaging (we advise using the whole bag).

The mixture can be prepared in:

- a suitable mixing pump;
- a mortar mixer or drill-type mixing device with a low-rev agitator.

### → Application

Metric Protection must be applied with a spreader or with a suitable pump for spraying low-thickness coverings.

Float with a sponge float as soon as the mortar achieves the right consistency; timing can vary, depending on temperature and thickness. Allow to cure during the first 24 hrs.

### → Cleaning

Residual traces of Metric Protection can be removed from tools and machines using water before the product hardens.

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## Certificates and marks



EN 1504-2(C)



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

Atocor® 11137-0008

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## Abstract

*Supply and laying of a single-component, thixotropic, elastic cement-based protective product, such as Metric Protection by Kerakoll, for the elastic, protective finishing of reinforced concrete and prestressed reinforced concrete elements of any nature and size. To be applied using a spreader or by machine after adequate preparation and wetting of the substrates until fully saturated. GreenBuilding Rating 3, CE-marked and compliant with the performance requirements of Standard EN 1504-2 (C); according to Principles as defined by Standard EN 1504-9.*

Technical Data compliant with Kerakoll Quality Standard		
Appearance	Powder	
Apparent volumetric mass	≈ 1280 kg/m <sup>3</sup>	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 kg bag	
Mixing water	≈ 4.5 l / 1 x 25 kg bag	
Flow of the mixture	≈ 80 – 120 mm	EN 13395-1
Density of the mixture	≈ 1570 kg/m <sup>3</sup>	UNI 7121
pH of the mixture	≥ 12.5	
Pot life	≥ 1 hr	
Temperature range for application	from +5 °C to +35 °C	
Minimum thickness	2 mm	
Maximum thickness per layer	3 mm	
Maximum thickness obtainable	6 mm	
Coverage	≈ 1.3 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.

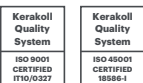
## Performance

### HIGH-TECH

Performance characteristic	Test Method	Requirements of standard EN 1504-2 (C)	Performance Metric Protection
Permeability to water vapour	EN ISO 7783-2	Reference class	class I: SD < 5 m
Capillary absorption and water permeability	EN 1062-3	$w < 0.1 \text{ kg}\cdot\text{m}^{-2}\cdot\text{h}^{-0.5}$	$w < 0.1 \text{ kg}\cdot\text{m}^{-2}\cdot\text{h}^{-0.5}$
Bond strength by pull off	EN 1542	≥ 0.8 MPa	> 3 MPa
Thermal compatibility with freeze/thaw cycles with de-icing salts	EN 13687-1	≥ 0.8 MPa	> 3 MPa
Crack Bridging properties	EN 1062-7	method A (static)	Class A2 > 0.25 mm (-20 °C)
		method B (dynamic)	B1 Class (+20 °C)
Chloride ion diffusion	UNI 7928	null	null
Reaction to fire	EN 13501-1	Euroclass	F

## Warning

- Product for professional use
  - 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 +35 °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 the Kerakoll Worldwide Global Service +39 0536 811 516 - [globalservice@kerakoll.com](mailto:globalservice@kerakoll.com)



The Rating classifications refer to the GreenBuilding Rating Manual 2012. This information was last updated in October 2023 (ref. GBR Data Report -10.23); 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 site 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.