

# 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

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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 hygrometric 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 with water under pressure.

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



When properly emptied, the packaging is recyclable as paper (up to 80 per cent) according to the ATICELCA® 50<sup>1</sup> method.



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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. 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                                | $\approx 1280 \text{ kg/m}^3$                                                               | UEAtc      |
| Aggregate mineral content                               | silicate - carbonate                                                                        |            |
| Grading                                                 | 0 – 0.5 mm                                                                                  | EN 12192-1 |
| Shelf life                                              | $\approx 12$ months from production in the original sealed packaging, protect from humidity |            |
| Pack                                                    | 25 kg bags                                                                                  |            |
| Mixing water                                            | $\approx 4.5 \text{ l} / 1 \text{ x } 25 \text{ kg bag}$                                    |            |
| Flow of the mixture                                     | $\approx 80 - 120 \text{ mm}$                                                               | EN 13395-1 |
| Density of the mixture                                  | $\approx 1570 \text{ kg/m}^3$                                                               | UNI 7121   |
| pH of the mixture                                       | $\geq 12.5$                                                                                 |            |
| Pot life                                                | $\geq 1 \text{ hr}$                                                                         |            |
| 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                                                | $\approx 1.3 \text{ kg/m}^2$ 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                                                |
|-------------------------------------------------------------------|---------------|------------------------------------------------------------|------------------------------------------------------------|
| 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       | $\geq 0.8 \text{ N/mm}^2$                                  | $> 3 \text{ N/mm}^2$                                       |
| Thermal compatibility with freeze/thaw cycles with de-icing salts | EN 13687-1    | $\geq 0.8 \text{ N/mm}^2$                                  | $> 3 \text{ N/mm}^2$                                       |
| Crack Bridging properties:                                        | EN 1062-7     | Reference class                                            |                                                            |
| - 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                                                  | A2-s1, d0                                                  |

# Warning

- 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)



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