

# Metric R2 Fix

**High ductility, fibre-reinforced thixotropic mortar for concrete and masonry reconstruction.**

**Metric R2 Fix is a class R2 mortar for repairing concrete structures and anti-cracking interventions.**



1. Thixotropic, class R2
2. Thicknesses from 2 to 40 mm in a single coat
3. For non-structural repairs of concrete
4. For repair of brick, stone and concrete structures
5. Applicable with a machine

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## Areas of application

### → Intended use:

- Non-structural repair of weakened masonry and concrete parts
- Smoothing and filling of surface defects such as construction joints, honeycombs, holes

- Repair of damaged masonry facings and stringcourses

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## Instructions for use

### → Preparation of substrates

Before applying Metric R2 Fix it is necessary to:

- restore the concrete substrate and roughen it by mechanical scarification, sandblasting or hydro-demolition to a depth of at least 1-2 mm, thoroughly removing all weakened concrete;
- clean the treated substrate using compressed air or a high pressure washer;
- saturate with water until the substrate is saturated yet with no excess water on the surface.

Check that the resistance class of the supporting concrete is suitable.

For application on masonry, clean the support thoroughly and saturate using water.

### → Preparation

Prepare Metric R2 Fix 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

- In localised and/or generalised non-structural repair work in which Metric R2 Fix is applied in thicknesses from 2 mm to 40 mm (maximum per layer), apply the mortar by hand using a trowel or a mortar spray machine. Float with a sponge float as soon as the mortar achieves the right consistency; timing can vary, depending on temperature and thickness.
- For the repair of clay brick, stone and concrete structures as well as stringcourses, apply the first coat of mortar ensuring that enough material is applied to the adequately prepared substrate in order to incorporate the sheet and to level any irregularities. Apply Geo Grid 120, Geosteel Grid or Rinforzo ARV 100, using a suitable flat spreader to press down hard enough to ensure the correct impregnation and eliminate any air bubbles. Apply the second coat until the sheet is completely covered.
- Mechanized application: it is recommended to use a continuous cycle pump equipped with a stator suitable for the maximum grain size of the product (0.5 mm) or an indirect mixing pump.

Allow the surfaces to cure for at least 24 hrs.

### → Cleaning

Residual traces of Metric R2 Fix can be removed from tools and machines using water before the product hardens.

# Certificates and marks



When properly emptied, the packaging is recyclable as paper (up to 80 per cent) according to the ATICELCA® 50+ method.





**A+**

\* 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).

# Abstract

Supply and laying of a high ductility, fibre-reinforced, thixotropic mortar, such as Metric R2 Fix by Kerakoll, for the reconstruction of damaged or deteriorated sections of concrete and masonry, to be applied with a trowel 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 1504-3, Class R2, type CC and PCC according to Principles as defined by Standard EN 1504-9.

| Technical Data compliant with Kerakoll Quality Standard |                                                                                     |            |
|---------------------------------------------------------|-------------------------------------------------------------------------------------|------------|
| Appearance                                              | powder                                                                              |            |
| Apparent volumetric mass                                | ≈ 1340 kg/m³                                                                        | 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 bags                                                                          |            |
| Mixing water                                            | ≈ 4.5 l / 1 x 25 kg bag                                                             |            |
| Flow of the mixture                                     | ≈ 170 – 180 mm                                                                      | EN 13395-1 |
| Density of the mixture                                  | ≈ 1750 kg/m³                                                                        | UNI 7121   |
| pH of the mixture                                       | ≥ 12.5                                                                              |            |
| Start/End of setting                                    | ≥ 2 hrs                                                                             |            |
| Temperature range for application                       | from +5 °C to +35 °C                                                                |            |
| Minimum thickness                                       | 2 mm                                                                                |            |
| Maximum thickness per layer                             | 40 mm                                                                               |            |
| Coverage                                                | ≈ 15 kg/m² per cm 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                                                        |                       |                                           |                                             |
|--------------------------------------------------------------------|-----------------------|-------------------------------------------|---------------------------------------------|
| VOC Indoor Air Quality (IAQ) - Volatile organic compound emissions |                       |                                           |                                             |
| Conformity                                                         | EC 1 plus GEV-Emicode |                                           | Cert. GEV<br>17757/11.01.02                 |
| HIGH-TECH                                                          |                       |                                           |                                             |
| Performance characteristic                                         | Test Method           | Requirements of<br>EN 1504-3 class R2     | Performance                                 |
| Compressive strength after 28 days                                 | EN 12190              | ≥ 15 N/mm²                                | > 15 N/mm²                                  |
| Flexural tensile strength                                          | EN 196-1              | None                                      | > 9 N/mm²                                   |
| Adhesive bond after 28 days                                        | EN 1542               | ≥ 0.8 N/mm²                               | > 2 N/mm²                                   |
| Modulus of elasticity under compression                            | EN 13412              | none                                      | 13 GPa                                      |
| Modulus of elasticity under compression:                           | EN 13412              | none                                      |                                             |
| - CC                                                               |                       |                                           | 9 GPa                                       |
| - PCC                                                              |                       |                                           | 10 GPa                                      |
| Thermal compatibility with freeze/thaw cycles with de-icing salts  | EN 13687-1            | bond strength after 50 cycles ≥ 0.8 N/mm² | > 2 N/mm²                                   |
| Capillary absorption                                               | EN 13057              | none                                      | < 0.5 kg·m <sup>-2</sup> ·h <sup>-0,5</sup> |
| Chloride ion content (determined on the product in powder form)    | EN 1015-17            | ≤ 0.05%                                   | < 0.05%                                     |
| Reaction to fire                                                   | EN 13501-1            | Euroclass                                 | A1                                          |
|                                                                    | Test Method           | Requirements of<br>EN 1015-1              | Performance                                 |
| Adhesion to masonry after 28 days                                  | EN 1015-1             | None                                      | > 2 N/mm²                                   |

Values taken at +21 °C, 60% R.H. and no ventilation. Data may vary depending on specific conditions at the building site.

## 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 Kerakoll Technical Customer Service: + 39 0536.811.516

www.kerakoll.com/contatti



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