

# MATERICA

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MATERICA is a single-component, thixotropic, fibre-reinforced, self-passivating, compensated-shrinkage mortar composed of high-performance cements, industrial sands with a maximum grain size of 0.5 mm and specific additives. Perfectly workable, the layers applied have excellent adhesion, durability, impermeability, exceptional mechanical strength and resistance to atmospheric pollutants. Ideal for restoring or smoothing concrete, without prior passivating treatment of the bars.

- Radon Free
- Resistant
- Versatile
- Highly Adhesive
- Quick
- Easy
- Pollution Resistant
- Consolidating Treatment
- Restoration CLS



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## Features

MATERICA is suitable for performing structural repairs of concrete or reinforced concrete surfaces, without the need for prior passivation treatment of reinforcement rods.

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## Fields of Application

Thanks to its high mechanical strength, cohesion and adhesion to reinforced concrete substrates, MATERICA mortar is particularly suitable for structural reinforcement with mesh (glass fibre, carbon fibre, steel), FRP composite materials and helical or FRP metal bars. MATERICA can be applied directly on vertical and horizontal surfaces consisting of reinforced concrete, mixed brickwork, concrete.

## Application

All substrates must be thoroughly prepared by manual or mechanical brushing, sandblasting and/or washing and the substrate must be rough and free of loose parts. Avoid application on gypsum substrates, painted surfaces and on substrates with poor mechanical resistance.

MATERICA can be mixed with a drill mixer at low speed, concrete mixer, or plastering machine with a screw and pump (rotor-stator D6-3) with about 90% of the water and the quantity of mortar useful for the correct realization of the mixture for the time necessary to obtain a homogeneous mixture without lumps, on average about 2 min, let the mixture rest for 2/3 min and resume mixing.

Apply with a trowel in a layer of not less than 8 mm and not more than 5 cm per coat. If MATERICA is used for the reinforcement of existing CLS surfaces, it is advisable to include a TCS GLASS MR 44/48/88 reinforcing mesh and TCS TWIST 9A2 helical bars or TCS GLASS CONNECTOR "L" fibre connectors of suitable length. MATERICA can be finished with a trowel.

Keep the surface of the mortar moist and in any case avoid the sudden evaporation of the contained water; this operation is particularly important in hot, dry and windy climates. It can be covered with skim coat after approximately 12-24 hours under normal conditions, but drying is highly dependent on environmental conditions.

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## Warnings

- Product for professional use.
- Do not modify the product.
- Store the product in a dry place, in the original unopened packaging.
- Consult safety data sheet before using the product.
- The data given correspond to the technical and applicative knowledge in our possession for an appropriate use of the product. We therefore recommend carrying out a prior practical test in order to check the suitability of the product for its intended use and consumption.
- Protect surfaces from atmospheric phenomena, sun, wind, rain and frost.
- Since our company is not the executor of the works and cannot directly intervene on site conditions and the methods of execution of the works, the indications given are to be considered indicative and general, and therefore not binding for the same.
- The company reserves the right to make any changes it deems necessary at any time and without prior notice.
- For further information and practical product demonstrations, please consult our technical service.
- Always refer to the latest versions of the technical data sheets available at [www.tcs-srl.it](http://www.tcs-srl.it).

## Technical Data

**PRODUCT TYPE:** R4 repair mortar according to EN 1504-3

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**GRAIN SIZE CURVE (EN 1015-1)** 0-1.4 mm

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**pH OF THE MIXTURE** > 12

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**APPARENT DENSITY IN PILE** average 2100 kg/m<sup>3</sup>

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**COMPRESSIVE STRENGTH 28 DAYS (EN 1015-11)** 52 MPa

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**FLEXURAL STRENGTH (EN 1015-11)** 7 MPa

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**ELASTIC MODUL** 20 GPa

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**ADHESION (EN 1015-12)** 2.7 MPa

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**FLAME RESISTANCE (EN 13501-1)** Euroclass 1

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**MIXING WATER** 16% (4 l/bag)

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**CONSUMPTION** 19 kg/m<sup>2</sup> per cm of thickness

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**THICKNESS PER COAT** min 2 mm max 5 cm

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**PACKAGING** 25 kg/bag

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**PALLET** 48 bags, 1200 kg

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**STORAGE** 6 months in the original packaging in a dry place

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**APPLICATION TEMPERATURE** from +5°C to +32°C

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**REACH CLASSIFICATION** See SDS