

# REPI FIX

## REPIFIX RAPID+ WRM 520

Fast setting repairing mortar

REPIFIX RAPID+ WRM 520 is a resinous polymer-modified one-component, cement based, superfast setting (20min) repairing mortar for concrete. It is non shrinkable with optimum cohesion with concrete. After mixing with water the resulting paste can be applied using a trowel. It consists of special specification cement, quartz aggregates with high silicone dioxide content and of chosen granulometry, resins and special admixtures which improves workability, regulates hydration-shrinkage mechanisms and improves mechanical strength. It is classified as a PCC R3 type repairing mortar for concrete according to EN 1504-3.

### Advantages:

- Sets in 20min.
- Reaches its full strength in 24 hours
- Excellent adhesion on the substrate.
- Non shrinkable.
- Superior strength.
- Optimum workability.
- It is produced with quartz sand.
- Resistance to humidity.
- Resistance to abrasion.
- Application thickness up to 5 cm locally.



## TECHNICAL CHARACTERISTICS



### Packaging:

- Paper valve bag 25kg
- Plastic bag 5kg



### Application:

Suitable for repairs, structural and non-structural, of concrete elements on vertical or horizontal surfaces. It is used for restoring loosened concrete elements (e.g. due to carbonation, corrosion, cracking, stress). Due to its fast-setting properties it is ideal when repairs are taking place at low temperatures



### Storage:

Store in sealed bags in a dry environment at temperatures above 0° C for 6 months from the production date.



### Color:

Grey.



### Consumption:

Approximately 19-20 kg/m<sup>2</sup> per cm layer thickness

## FIELDS OF APPLICATION

REPIFIX RAPID+ WRM 520 is suitable for:

- Restoration of damages on concrete deriving from constructional defects, wear, impact, etc.
- Repair and restoration of old and new, structural or non-structural concrete elements.
- Protection of the reinforcement from oxidation and corrosion on defective or worn concrete.
- Repairs of worn floors, cement mortar and other constructions based on cement.
- Repairs of steps, parapets, pre-constructed and other concrete elements.

## SUBSTRATE PREPARATION

Firstly, make sure that the surface is clean from loose particles and corroded or carbonated parts of concrete using a hammer, chisel or a sand blaster. In case of existing reinforcement, this needs to be exposed peripherally in order for the material to penetrate. Prior to the application roughen the concrete surfaces that will come in contact with the product. Remove all residues with water under pressure and remove any excess water. It is recommended to pre-coat the substrate and the metallic reinforcement with REPIFIX PROTECT WRM 510 (reinforcement corrosion inhibitor and bonding bridge mortar) before the application in order to ensure the optimum adhesion with the substrate. The substrate must be slightly wet.

## APPLICATION

In a clean container add 3,5-4 liters of clean water and gradually empty the content of the bag while mixing continuously, in order to produce a homogenous mass of mortar. Leave the mixture to mature for 3 min and mix again briefly. It is also recommended to periodically mix the mixture for as long as the repair lasts. Do not add additional water to correct the workability of the mortar. This shall lead to a decrease of resistances and to the increase of its shrinkage. Wherever necessary cast the part of concrete to be repaired and then place the REPIFIX RAPID+ WRM 520 repairing mortar taking care that there is a careful layering and covering of all porous or pits. Make sure that all the air pockets are removed and there are no voids.

The thickness of the mortar can reach up to 5 cm for localized repairs. To obtain uniform strengths and to avoid cracks the final surface must be retained wet for the first few days following the application and rapid drying must be prevented by way of a suitable wet cover. Special care must be taken during the summer months, and for surfaces exposed to strong sun. The product must be applied when the ambient temperature is between +5°C and +35°C and not under rain. When the temperature is high, the strength develops faster, while the workability of the material decreases. In low temperatures, the strength development is delayed. The wooden casts must be well saturated but without forming water pools.

## CLEANING OF TOOLS

Tools should be cleaned immediately after application with plenty of water.

## NOT RECOMMENDED

The application of the product is not allowed:

- When there is a frost forecast for the next 24 hours after the application of the product.
- Under wet conditions.
- On substrates directly exposed to intense solar radiation or on warm substrates.

## PRECAUTIONS

REPIFIX RAPID+ WRM 520 product contains cement and reacts with water to produce an alkaline solution. For this reason, protect your eyes and skin. In case of contact rinse with plenty of water. In case of contact with eyes seek medical advice immediately. Read the information on the label and in the product's Technical Brochure before use. Wear appropriate protective clothing and gloves. The product's Safety Sheet is available to professionals upon request.

Technical characteristics	Units	Standard	Value
Appearance			Dry powder
Color			Grey
Maximum thickness of application (for localized repairs)	cm		5
Temperature resistance	°C		-30 to 90
Maximum grain size	mm		1.4
Workable time	min	EN 1015-9	15
Setting time	min	EN 196-3	20-30
Dry bulk density	kg/l	EN1097-3	1.70 ± 0.10
Compressive strength	MPa	EN 12190	≥ 25.0
Flexural strength	MPa	EN 12190	≥ 4.0
Elastic modulus	GPa	EN 13412	≥ 15
Carbonation resistance	(Pass/Fail)	EN 13295	Pass
Chloride ion content	%	EN 1015-17	≤ 0.05
Thermal compatibility part 1	MPa	EN 13687-1	>1.5
Bond strength	MPa	EN 1542	≥ 1.5
Capillary absorption	Kg*m <sup>-2</sup> *h <sup>0.5</sup>	EN 13057	<0.5
Shrinkage			No

\*Note: The measurements were taken in laboratory environment under a temperature of +23°C, Relative humidity 50% and without ventilation. It is possible for them to vary depending on the conditions prevailing at the worksite, such as temperature, humidity, ventilation, absorbability of the substrate.

The technical information and instructions contained in the present brochure and referring to the application and end use of Thrakon products are based on the up to now know-how and experience of the Company with regards to the products and are provided in good faith as long as such products are stored, used and applied as per Thrakon recommendations. Due to the inability, on our part, to directly inspect the conditions prevailing at the worksite as well as the application procedures of the product, the Company does not provide any guarantee with regards to the adequacy of its products for specific purpose while the Company shall not bear any legal responsibility based on the information stated in the present brochure or any other written, oral, or otherwise provided recommendations and instructions. The users of the products are advised to perform a limited surface testing of the products adequacy for the eventual application and use intentions. Thrakon reserves the right to modify the features of its products without prior notification. All orders shall be approved only following acceptance of the above and under the eventual Commercial Policy terms of the Company. The issuance of the present brochure voids any prior version.

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