

WRM 520

FAST SETTING REPAIRING MORTAR

Category R3

ACCORDING TO
EN 1504-3

DESCRIPTION

WRM 520 product is a one-component, cement based, superfast setting (20min) repairing material for concrete. It is a non shrinkable material with optimum cohesion with concrete. When it is mixed with water a paste is produced which can be applied using a trowel or a

metallic trowel on the surface to be repaired. It consists of special specification cement, quartz aggregates with high silicone dioxide content and of chosen granulometry, resins and special admixtures.

FIELDS OF APPLICATION

It is suitable for:

- Restoration of damages on concrete deriving from constructional defects, wear, impact, etc.
- Repair and restoration of old and new, reinforced or unreinforced concrete.
- 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.

ADVANTAGES - CHARACTERISTICS

- It sets in 20min.
- Rapid development of strengths (24 hours).
- Strong adhesion on the substrate.
- Non shrinkable.
- High strengths.
- Optimum workability.
- It is produced with quartz sand.
- Resistance to humidity.
- Resistance to abrasion.

SUBSTRATE PREPARATION

Firstly, make sure that the surface is clean from loose particles and corroded or carbonated parts of concrete using a hammer or 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 the primer WRM 510 before the application of the product, in order to ensure the optimum adhesion of the material to the substrate. The substrate must be slightly wet.

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.



APPLICATION

In a clean container add 3,5-4 litres 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 **WRM 520** repairing mortar taking care that there is a careful layering and covering of all voids. Make sure that all the air pockets are removed and there are no voids. The

thickness of the mortar can reach up to 5cm 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.

CONSUMPTION

- Approximately 19-20kg/m²/cm thickness per layer.
- 25 kg of dry mortar yield approximately 13 lt of fresh mortar.

PACKAGING - STORAGE

The product is packaged in 5Kg plastic bags and in 25Kg paper valve bags. It is stored sealed in a dry environment with temperature above 0 °C for 6 months from the production date.

CLEANING OF TOOLS AND MACHINES

With plenty of water immediately after use.

NOT RECOMMENDED

The application of the product is not allowed:

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

PRECAUTIONS

The **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.

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TYPE R3 OF THE EUROPEAN STANDARD EN 1504-3

TECHNICAL CHARACTERISTICS	UNITS	STANDARD	VALUE
Appearance			dry powder
Color			grey
Maximum thickness of application (for localized repairs)	(cm)		5
Temperature resistance	(⁰ 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
Compressive strength	(MPa)	EN 12190	≥ 25
Flexural strength	(MPa)	EN 12190	≥ 4
Dry bulk density	(Kg/l)	EN 1097-3	1,70±0,10
Elastic modulus	(GPa)	EN 13412	≥ 15
Carbonation resistance	(Pass/Fail)	EN 13295	Passes
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 ⁻² ·h ^{-0,5})	EN 13057	≤ 0,5
Shrinkage			No

Note: The measurements were taken in laboratory environment under a temperature of +23⁰C, 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, absorability of the substrate.