WRM 518
FAST SETTING REPAIRING MORTAR

Category R2 ACCORDING TO **EN 1504-3**

DESCRIPTION

WRM 518 is a one-component, fast setting, resinous, polymer modified, cement based repairing mortar for concrete. It is consists of cement, quartz sand, and additives. After mixing with water the resulting paste can be applied by trowel to repair the surface. **WRM 518** does not shrink and has very good adhesion to concrete, frost and moisture resistance. It is suitable for inside and outside use. It is classified as a PCC R2 type repairing mortar for concrete according to EN 1504-3.

FIELDS OF APPLICATION

- Suitable for concrete or brickwork repair and patching, etc.
- For groove formation on the connections between floors and walls (i.d. at the corners between the concrete slab and the basement floor, etc) or at the corners between the walls.
- For leveling of irregularities or for parts of concrete surfaces that suffers from separation of aggregates.
- After hardening, **WRM 518** can be covered with waterproofing materials like bituminous base sealants or flexible cementitious waterproofing slurries.

ADVANTAGES - CHARACTERISTICS

- Fast setting.
- Non shrinkable with high adhesion strength to the concrete.
- Rapid strength development.
- Applied by trowel.
- Application thickness up to 1cm.
- Resistance to humidity.
- Resistance to abrasion.

SUBSTRATE PREPARATION

Firstly, make sure that the surface is clean from unstable materials 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 and roughen the concrete surfaces it will come in contact with. 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.

APPLICATION

In a clean container add 4,6-5 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 518** repairing mortar taking care that there is a careful layering and covering of all voids. Make sure that all the air cavities are removed and there are no voids.

The thickness of the mortar can reach up to 1cm per layer. 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 $+5^0$C and$+35^0$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 15kg/m^2/cm thickness per layer.
- For groove formation of thickness 5-6 cm: 1,8-2,6 kg/m.

PACKAGING - STORAGE

The product is packaged in 25Kg paper valve bags It is stored sealed in a dry environment with temperature above 0^OC 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 518** 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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CE

TYPE R2 OF THE EUROPEAN STANDARD EN 1504-3

TECHNICAL CHARACTERISTICS	UNITS	STANDARD	VALUE
Appearance			dry powder
Color			grey
Reaction to fire	(EUROCLASS)	EN 13501-1	A1
Maximum thickness of application	(cm)		1
Temperature resistance	(^{0}C)		-30 to +90
Maximum grain size	(mm)		1,4
Workable time (20^{0}C)	(min)	EN 1015-9	45-50
Setting time (start-end)	(min)	EN 19603	50-80
Dry bulk density	(Kg/l)	EN 1097-3	1,48±0,10
Compressive strength	(MPa)	EN 12190	≥ 15
Chloride ion content	(%)	EN 1015-17	≤ 0,05
Thermal compatibility part 1	(MPa)	EN 13687-1	≥ 0,8
Bond strength	(MPa)	EN 1542	≥ 0,8
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 +23^{0}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.*