



PC-Conrend®HS RM

Polymer-modified, fiber-reinforced, repairing cement mortar

PC-Conrend®HS RM is a pre-mixed cement mortar enhanced with polymers and fibers, free from corrosive elements, making it suitable for both interior and exterior applications. This product delivers abrasion resistance, excellent adhesion to substrates, water impermeability, and streamlines construction processes. It is categorized as a PCC R3 type mortar for concrete restoration, complying with EN 1504-3 standards. Certificate Number: 2032-CPR-10.11.

FEATURES

- User-friendly application (simply mix with water).
- Excellent workability.
- Adjustable consistency.
- Applicable for both Structural and Cosmetic repairs, allowing for layering up to 50 mm thickness on vertical surfaces.
- Exceptional adhesion.
- Superior resistance to abrasion, wear, and impact.
- Ideal for repairs surpassing 5 mm.
- Non-corrosive and non-toxic, enhancing durability against salt water, chlorides, and carbonation.
- Suitable for spraying, facilitating intricate profile repairs with minimal rebound.

PRODUCTS PROPERTIES

Physical Properties	Typical Value
Form	Grey powder
Composition	Portland cement, selected fillers and aggregates, special additives
Colors	Grey
Pot Life	4 h at +20°C
Water demand	4.60 l/25 kg bag
Bulk density of dry mortar	1.45 kg/L
Bulk density of fresh mortar	1.90 kg/L
Elastic modulus	≥ 15 GPa
Compressive strength	≥ 25.0 N/mm ² in 24 Hours ≥ 45.0 N/mm ² in 7 days ≥ 65.0 N/mm ² in 28 days
Flexural strength	≥ 7.0 N/mm ²
Chloride ion content	0.00 %
Adhesion	≥ 1.7 N/mm ²
Thermal compatibility Part 1 (50 freeze-thaw cycles)	≥ 1.5 N/mm ²
Reaction to fire	Euroclass A1

PROTECTIVE COATINGS

It is recommended to apply subsequent coatings of anti-carbonation barriers or silane impregnations in accordance with the corresponding data sheets.

USES

PC-Conrend®HS RM is used for concrete or brickwork repairs, as well as patching, forming fillets etc. **PC-Conrend®HS RM** is applied in layers of up to 3 cm in case of large surfaces, and in layers of up to 5 cm for localized repairs.

SURFACE PREPARATION

All remnants of concrete, mortar, dust, grease, oil, etc., must be completely removed. Damaged or contaminated concrete should be removed to expose the aggregate surface. Utilize non-impact/vibrating cleaning methods like grit or high-pressure water blasting. The repair edges should be cut vertically to a depth of at least 5 mm. Ensure all exposed reinforcement is cleaned to a minimum SA 2 grade following ISO 8501-1 / ISO 2944-4 standards. Clear the back of the rebar from contaminants as well. If corrosion is detected on reinforcing bars, cut back the concrete by at least 20mm behind them. Use grit blasting to remove corrosion products around the bars and then coat with **PC-Conrend®ZRP** to prevent further corrosion. If the diameter of the reinforcing bars is reduced by over 20% after grit blasting, consider replacing the affected section with guidance from the project's structural engineer.

After completing the necessary preparation steps outlined above, the concrete surface is now ready for repair and restoration. When applying new concrete, make sure it is of high quality and compatible with the existing structure to ensure long-lasting results. Properly place and compact the fresh concrete to achieve a smooth and uniform finish.

MIXING

Only intact bags should be utilized for mixing. Damaged or opened bags are not suitable for this purpose. Combine **PC-Conrend®HS RM** in a forced action pan mixer or use a helical paddle connected to a low-speed (300-600 rpm) mixer for approximately 3 minutes until a smooth, thixotropic consistency is achieved. Ensure that only clean water is employed. The recommended mixing water quantity ranges from 3.25 to 3.75 liters per 25kg bag. Allow the mortar to rest for 2-3 minutes before briefly remixing it prior to application. In cases where the temperature exceeds 30°C, it is advisable to use chilled water for the mixing process.

PRIMING CONCRETE

No special primer is required. To improve bonding strength, it is recommended to apply a slurry brush coat of **PC-Conrend®HS RM** (mixing 2 parts powder with 1 part water) onto a damp substrate.



MORTAR PLACING

To ensure optimal curing of the product, it is imperative to maintain minimum temperatures during application and for a minimum of 24 hours afterward. The substrate should be adequately prepared by pre-soaking, ideally for 24 hours, or at least 2 hours before applying **PC-Conrend®HS RM**. The surface must achieve a saturated surface dry condition, devoid of standing water. **PC-Conrend®HS RM** can be applied via spray or by hand. The mixed product should be directly applied to the prepared damp substrate or applied wet onto the primed surface. Utilizing the appropriate pressure during spraying is essential for securing good material adhesion. For hand application, a thin scrape coat or contact layer before incrementally building up to the required thickness, wet on wet, will enhance adhesion. The product should be applied to a layer thickness ranging from 12 mm to a maximum of 50 mm and leveled using a screeding bar, trowel, or wooden board. In cases where thicker layers are needed, especially in smaller patches or areas with additional reinforcement, this can be accommodated. Smoothing with a trowel or finishing with a float or sponge should commence as soon as the mortar begins to stiffen.

CURING

For **PC-Conrend®HS RM**, it's recommended to cure it post formwork removal by utilizing **PC-Buildcure®WB**.

PACKAGING

PC-Conrend®HS RM is available in 25kg bags.

SHELF LIFE

9-12 Months from date of Manufacture if stored in Unopened Packaging. Protect from Rain, Direct Sunlight, Heat and Frost.

CLEANING OF EQUIPMENT

It's crucial to clean all tools and application equipment with water immediately after use. If materials are allowed to harden or cure, they can only be removed through mechanical means.

HEALTH AND SAFETY

To obtain complete information on health and safety hazards and the proper handling and usage of this product, kindly acquire a copy of the PC-WC Material Safety Data Sheet (MSDS) from our office or website.

Taking the time to familiarize yourself with the PC-WC Material Safety Data Sheet (MSDS) is essential for maintaining a safe and healthy environment when using our product. The MSDS contains detailed information on the potential health and safety hazards associated with the product, as well as guidelines on its proper handling and usage. By obtaining a copy from our office or website, you are demonstrating a proactive approach to ensuring the well-being of yourself and those around you. Remember, knowledge is power when it comes to safety, so don't hesitate to access the MSDS and equip yourself with the necessary information. Stay informed, stay safe!

REMARKS

- The temperature during application must be a minimum of +5°C.
- In summer, it is recommended to dampen **PC-Conrend®HS RM** after application to prevent water loss in high temperatures.
- Since the product contains cement that reacts with water to create alkaline solutions, it is classified as an irritant.
- Refer to the instructions for safe usage and precautions provided on the packaging.



PC-WC GLOBAL FZ-LLC

Compass Building, Al Shohada Road Al-Hamra Industrial Zone-FZ,
Ras Al-Khaimah, UAE
Email: info@pc-wc.com
Phone +971542455817, www.pc-wc.com

TECHNICAL DATA SHEET UPDATED IN
SEPTEMBER 2020
TDS/PC-CONREND®HS RM/20

All technical data in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

The information, particularly the recommendations relating to the application and end-use of PC-WC products, are given in good faith based on PC-WC's current knowledge and experience of the products when properly stored, handled and applied under normal conditions by PC-WC recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or any other advice offered. The user must test the product's suitability for the intended application and purpose. PC-WC Global FZ-LLC reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Our technical assistance is at the disposal of the users. Consult the latest update of the technical data sheet on our [website www.pc-wc.com](http://www.pc-wc.com)