

# MC-RIM PROTECT

Highly sulphate resistant, fibre-reinforced surface protection for use in wastewater industry



## PRODUCT PROPERTIES

- One-component, polymer-modified
- Application by hand and wet or dry spraying
- Resistant from pH 14 to pH 3.35
- Very high chloride resistance
- Carbonation retarding
- Open to water vapour diffusion
- Impermeable to water and resistant to permanent water exposure
- Class R 4 according to EN 1504 part 3

## AREAS OF APPLICATION

- Surface protection of concrete-, reinforced concrete- and prestressed concrete components (new and existing constructions) in sewage structures
- Suitable for rain spillway basins, primary and secondary sedimentation basins, activated sludge tanks, sand traps, screen structures, sludge thickeners, digestion towers (sludge zone)
- Suitable for exposure to XD 1-3, XS 1-3, XC1-4, XF 1+3, XA 1-3, XWW 1-3 and XWWW4
- Certified according to EN 1504 part 2 for principle 1, procedure 1.3 / principle 2, procedure 2.2
- Certified according to EN 1504 part 3 for principle 3, procedure 3.1 and 3.3
- WW-coating mortar according to DIN 19573

## APPLICATION ADVICE

**Substrate Preparation:** See leaflet "General Application Advice Product Line MC-RIM PROTECT".

**Mixing:** MC-RIM PROTECT is added to the prepared water under constant stirring and mixed until homogeneous and lump-free. Forced mixers or slowly rotating double-mixers must be used for mixing. Mixing by hand or preparation of partial quantities is not permitted. Mixing takes 5 minutes.

**Mixing Ratio:** Please refer to the "Technical values & product characteristics" table. For a 25 kg bag of MC-RIM PROTECT approx. 3.75 to 4.00 litres of water are required. As with other cement-bound products the quantity of added water may vary.

**Application:** MC-RIM PROTECT can be applied by hand and spraying technique. Hand application is carried out using trowels and steel floats. Wet spraying is carried out with variably adjustable worm pumps. Dry spraying should be carried out using the spraying technology of the Co. Werner Mader. Please request our technical advice or the equipment planner leaflet "Dry Spray Technology MC Product Systems".

Depending on system build-up and application MC-RIM PROTECT is to be applied in 2 to 3 work steps. Please see leaflet "General Application Advice Product Range MC-RIM PROTECT".

**Finishing:** MC-RIM PROTECT may remain spray-fine or be abraded or smoothed. Please see leaflet "General Application Advice Product Range MC-RIM PROTECT".

**Curing:** MC-RIM PROTECT must be cured for 5 days using moist jute and plastic foil. The jute must not dry out during this time and must be kept moist. Alternatively the last layer of MC-RIM PROTECT may also be cured with the curing agent MC-RIM PROTECT-C.

**General Information:** Exposure to direct sun must be avoided during application of MC-RIM PROTECT.

## TECHNICAL VALUES & PRODUCT CHARACTERISTICS

Characteristic	Unit	Value	Comments
Mixing ratio	mass fractions	25 : 3.75 - 4	powder component : water
Working time	minutes	45	at 5° C
		30	at 20 °C
		20	at 30 °C
Application conditions	°C	≥ 5 ≤ 30	Temperatura del aire, soporte y material
Consumption	kg/m <sup>2</sup> /mm	1.72	factory-dried mortar
Layer thickness 1)	mm	5	minimum layer thickness per pass/operation
		15	maximum total layer thickness
Water resistant after	days	2	at 10° C
		1	at 20 °C
Maximum grain size	mm	1.2	
Dry bulk density	kg/dm <sup>3</sup>	approx. 1.92	
Fresh mortar bulk density	kg/dm <sup>3</sup>	approx. 1.99	
Compressive strength	N/mm <sup>2</sup>		
		7 d	44
		28 d	58.6
Flexural strength	N/mm <sup>2</sup>		
		7 d	6.6
		28 d	7.8
E-modulus (dynamic)	N/mm <sup>2</sup>	24,000	after 28 days
Total air void volume	Vol.-%	5.2	after 28 days
		4.8	after 90 days
Chloride migration coefficient	m <sup>2</sup> /s	0.36 · 10 <sup>-12</sup>	
Water penetration depth	mm	< 1	at 5 bar gauge pressure per EN 12390-8
Sulphate resistance	mm/m	0.077	after 91 days (SVA method)

All technical values are laboratory results determined at 21°C ±2°C and 50% relative humidity.

1) Recommended standard layer thickness: 8 - 10 mm

Equipment cleaning agent	water
Colour	Cement grey
Delivery form	25 kg bag
Storage	Can be stored in original sealed packages at temperatures between 5°C and 25°C in dry conditions for at least 12 months.
Packaging disposal	Make sure single-use containers are completely empty.

### Safety instructions

Please note the safety information and advice given on the packaging labels and safety data sheets. GISCODE : ZP1

**Note:** The information contained in this data sheet is based on our experience and is correct to the best of our knowledge. It is, however, not binding. It will need to be adapted to the requirements of the individual structure, to the specific application and to non-standard local conditions. Application-specific conditions must be checked in advance by the planning engineer/specifier and, where different from the standard conditions indicated, will require individual approval. Technical advice provided by MC's specialist consultants does not replace the need for a planning review by the client or its agents in respect of the history of the building or structure. Subject to this prerequisite, we are liable for the correctness of this information within the framework of our terms and conditions of sale and delivery. Recommendations of our employees deviating from the information given in our data sheets are only binding for us if they are confirmed in writing. In all cases, the generally accepted rules and practices reflecting the current state of the art must be observed. The information given in this technical data sheet is valid for the product supplied by the country company listed in the footer. It should be noted that data in other countries may differ. The product data sheets valid for the relevant foreign country must be observed. The latest technical data sheet shall apply to the exclusion of previous, duly superseded versions; the date of issue in the footer must be observed. The latest version is available from us on request or may be downloaded from our website. [2400020493]