



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 3.35 to pH 14
- Very high chloride resistance
- 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, XF 1+3, XA 1-3 and XWW 1-3
- Certified according to EN 1504 part 3 for principle 3, procedure 3.1 and 3.3

Application

Substrate Preparation

See leaflet "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 Data" 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 GUNMIX®-technology of Velco. Please request our technical advice or the equipment planner leaflet for spray application.

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-rough 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 Data MC-RIM PROTECT

Characteristic	Unit	Value*	Comment
Largest aggregate	mm	1.2	
Fresh mortar density	kg/dm ³	approx. 1.99	
Flexural tensile- / Compressive strength	MPa	6.6 / 44.0 7.8 / 58.6	after 7 days after 28 days
Dynamic E-Modulus	MPa	24,000	after 28 days
Sulphate resistance	mm/m	0.077	after 91 days (SVA-method)
Chloride migration coefficient	m ² /s	0.36x10 ⁻¹²	
CO ₂ -diffusion resistance	m	36	equivalent air layer thickness
Total pore volume	vol.-%	5.2 4.8	after 28 days after 90 days
Water load capacity	days	2 1	at +10 °C at +20 °C
Water penetration depth	mm	< 1	at 5 bar water pressure
Coverage	kg/m ² /mm	1.72	MC-RIM PROTECT
Application time	minutes	45 30 20	at + 5 °C at + 20 °C at + 30 °C
Layer thicknesses** (above grain tips)	mm	5 15	min. layer thickness max. total layer thickness
Application conditions	°C	≥ 5 - ≤ 30	air, material and substrate temperature
Mixing ratio	p.b.w.	100 : 15 - 16	MC-RIM PROTECT : water

Product Characteristics MC-RIM PROTECT

Colour	cement-grey
Delivery	25 kg bags
Storage	Can be stored in cool and dry conditions for at least one year in original unopened packs.
Disposal	Packs must be emptied completely.

* All technical data are lab values and relate to + 23 °C and 50 % relative humidity.

** The standard layer thickness should be 8 - 10 mm.

Note: The information on this data sheet is based on our experiences and correct to the best of our knowledge. It is, however, not binding. It has to be adjusted to the individual structure, application purpose and especially to local conditions. Our data refers to the accepted engineering rules, which have to be observed during application. This provided we are liable for the correctness of this data within the scope of our terms and conditions of sale-delivery-and-service. Recommendations of our employees which differ from the data contained in our information sheets are only binding if given in written form. The accepted engineering rules must be observed at all times.

Edition 01/19. Some technical changes have been made to this print medium. Older editions are invalid and may not be used anymore. If a technically revised new edition is issued, this edition becomes invalid.