



MC-RIM PROTECT-MR

Fibre-reinforced and highly sulphate resistant surface protection coating for use on mechanically stressed areas in sewage industry

Product Properties

- One-component, cement-bound, polymer-modified
- Hand and wet spray application
- Application by dry spraying using the GUNMIX® technology of Velco
- Resistant to pH 3.35 to pH 14
- Highly abrasion resistant, tested according to Böhme
- Resistant to permanent water exposure
- Open to water vapour diffusion, impermeable to water, chloride-proof
- Certified 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
- Particularly suitable for inlet- and drainage channels, inlet structures, spiral hoists (lining for spiral pump hutch), scraper trackways
- Classified according to EN 1504 part 3 for principle 3, procedure 3.1 and 3.3
- Suitable in accordance with EN 206, exposure classes XD 1-3, XS 1-3, XM 1-2, XF 1+3 and XA 1-3

Application

Substrate Preparation

See leaflet "General Application Advice Coarse Mortars/Concrete Replacement Systems".

Mixing

MC-RIM PROTECT-MR 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-MR 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-MR can be applied by hand and wet spraying technique. To achieve a dense and closed coating matrix, MC-RIM PROTECT-MR

is to be applied in 2 to 3 work steps. The first layer must be worked in thoroughly into the substrate. Hand application is carried out using trowels and steel floats. For wet spray application variably adjustable worm pumps must be used. Please see the equipment planner leaflet.

Exposure to direct sun must be avoided during application of MC-RIM PROTECT-MR.

Finishing

Following application MC-RIM PROTECT-MR can be smoothed, finished with standard curing equipment and slightly smoothed again to increase the surface smoothness and density.

Curing

MC-RIM PROTECT-MR 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 MC-RIM PROTECT-MR may also be cured with the curing agent MC-RIM PROTECT-C.



Technical Data MC-RIM PROTECT-MR

Characteristic	Unit	Value*	Comment
Largest aggregate	mm	1.2	
Fresh mortar density	kg/dm ³	approx. 2.03	
Flexural tensile- / Compressive strength	MPa	4.7 / 23.5 7.4 / 43.5 8.8 / 57.3	after 2 days after 7 days after 28 days
Dynamic E-Modulus	MPa	27,500	
Sulphate resistance (SVA-method)	mm/m	0.08	after 91 days
Shrinkage	mm/m	0.87	after 28 days
Chloride migration coefficient	m ² /s	0.26x10 ⁻¹²	
Abrasion resistance	class	A6	according to EN 13813
Water load capacity	days	2 1	at + 10 °C at + 20 °C
Coverage	kg/m ² /mm	1.75	MC-RIM PROTECT-MR
Application time	minutes	30	at + 20 °C
Layer thicknesses**	mm	5 15	min. layer thickness max. total layer thickness
Application conditions (above grain tips)	°C	≥ 5 - ≤ 35 ≥ 5 - ≤ 30	air- and substrate temperature material temperature
Mixing ratio	p.b.w.	100 : 15 - 16	MC-RIM PROTECT-MR : water

Product Characteristics MC-RIM PROTECT-MR

Colour	cement-grey
Delivery Storage	25 kg bags Can be stored in cool and dry conditions for at least one year in original unopened packs. Protect from frost.
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 10 - 15 mm. For use on scraper trackways the total layer thickness must be applied and MC-RIM PROTECT-SH is to be applied as additional surface finish.

Coating of screw pumping stations, layer thickness must be > 20 mm (application by courtesy of a rotating screw conveyor).

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 08/16. 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.