

MC-RIM PROTECT-ST

**Fibre-reinforced, cement-bound surface coating
for use in wastewater areas**

Product Properties

- One-component, polymer-modified
- Application by hand and wet spraying technique
- Highly sulphate resistant
- Resistant to permanent water exposure, chloride-proof
- Open to water vapour diffusion and impermeable to water
- Resistant to the range pH 4 to pH 14
- Class R4 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 rain spillway basins, primary and secondary sedimentation basins, activated sludge tanks, sand traps, screen structures, sludge thickeners, digestion towers (sludge zone)
- Optional: also suitable for closing of smaller ruptures
- Classified according to EN 1504 part 3 for principles 3 and 7, procedures 3.1, 3.3 and 7.1
- According to EN 206 suitable for exposure to XD 1-3, XS 1-3, XF 1+3 and XA 1-3

Application

Substrate Preparation

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

Bond Coat

Only in case of hand application Nafufill BC is to be used as bond coat. See leaflet "General Application Advice Coarse Mortars / Concrete Replacement Systems".

Mixing

MC-RIM PROTECT-ST is added to the water under constant stirring and mixed until a homogeneous, lump-free and workable mortar is achieved. Forced action mixers or slowly rotating double mixers must be used for mixing. Mixing by hand and preparation of partial quantities is not allowed. Mixing takes at least 5 minutes.

Mixing Ratio

Please see "Technical Data" table.
For a 25 kg pack of MC-RIM PROTECT-ST approx. 3.75 - 4.00 litres of water are required. As with other cement-bound products the quantity of added water may vary.

Application

MC-RIM PROTECT-ST can be applied by hand or wet spraying in one or more layers. A worm pump with adjustable discharge flow is advised for spray application. Please request our assistance or our spraying technique equipment planner leaflet.

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

Finishing

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

Curing

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

General Information

Optionally, MC-RIM PROTECT-ST can also be used for closing of smaller ruptures or surface roughness.

Technical Data for MC-RIM PROTECT-ST

Characteristic	Unit	Value*	Comments
Largest grain size	mm	2	-
Fresh mortar density	kg/dm ³	2.06	-
Dry mortar density	kg/dm ³	1.93	-
Bending tensile/ compressive strength	MPa	6.0/40.0 8.0/53.2	after 7 days after 28 days
Dynamic E-modulus	MPa	approx. 29,000	after 28 days
Shrinkage	mm/m	0.74	after 28 days
Chloride migration coefficient	m ² /s	0,87x10 ⁻¹²	
	Vol. %	8.0	after 28 days
Coverage (dry mortar)	kg/m ² /mm	1.78	
Pot life	minutes	60 45 30	at + 5 °C at + 20 °C at + 30 °C
Layer thickness	mm	10 20 40 40	min. layer thickness per work step max. layer thickness per work step max. total layer thickness reprofiling of disruptions
Application conditions	°C	≥ 5 - ≤ 30	air, material and substrate temperature
Mixing ratio	p. b. w.	100 : 15 - 16	MC-RIM PROTECT-ST : water

Product Characteristics for MC-RIM PROTECT-ST

Colour	cement-grey
Delivery	25 kg bags
Storage	Can be stored in cool (< 20 °C) and dry conditions for at least one year in originally sealed packs. Protect from frost!
Disposal	Packs must be emptied completely.

*All values have been determined in the lab at + 23 °C and 50 % relative humidity

Safety Advice

Please take notice of the safety information and advice given on the packaging labels and safety information sheets.

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 12/17. 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.