MC-RIM

Highly sulphate resistant, hand and spray applicable mineral coating for sewage industry

Product Properties

- Two-component
- Open to water vapour diffusion, impermeable to water
- Resistant to chloride
- Carbonation retarding
- Abrasion resistant according to DIN EN 19565

Areas of Application

- Surface protection of concrete-, reinforced concrete- and prestressed concrete components (new and existing constructions) in wastewater and landfill industry with pH 14 to pH 3.5
- Surface protection for sewage discharge troughs, rain spillway basins, primary and secondary sedimentation basins, activated sludge tanks, screen structures
- Coating of screw hoists (layer thickness > 5 cm)
- Suitable for interior and exterior areas
- Certified and classified according to EN 1504 part 2 for principles 1 and 2, procedure 1.3 and 2.2
- Suitable in accordance with EN 206, exposition classes XA1 - XA3

Application

Substrate Preparation
See leaflet “General Application Advice for Coarse Mortars / Concrete Replacement Systems”. Substrates with a lot of pores and voids must be filled in properly before coating. Maintenance of the surface roughness must be ensured.

Pre-wetting/Bond Coat
Use Nafufill HB-HS as bond coat. See leaflet “General Application Advice for Coarse Mortars / Concrete Replacement Systems”.

Mixing
The surface protection system is made of the factory-mixed dry mortar MC-RIM, MC-Additive RBI and water. MC-Additive RBI is added to a large quantity of the water, then the factory-mixed dry mortar is added and mixed a homogenous, lump-free and workable mortar is achieved. The remaining water is used to achieve the desired consistency, to be added if necessary. Forced mixers or slowly rotating 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 pack of MC-RIM 1.0 litre of MC-Additive RBI and 2.25 to 2.5 litres of water are required. As with other cementitious products the quantity of added water may vary.

Application
MC-RIM can be applied by hand or by spraying. It may be applied in one or several layers. When applying it by hand, trowels and trueing devices should be used. For spraying a worm pump with discharge flow adjustable should be used. In these cases please request our assistance or the equipment planner leaflet.

Exposure to direct sunlight must be avoided during application of MC-RIM.

Finishing
After application MC-RIM can be smoothed and finished with standard curing equipment. In case of spray applications the surface can remain spray rough.

Curing
Use jute and plastic films to prevent MC-RIM from drying out too rapidly due to exposure to direct sunlight and wind. The liquid curing agent MC-RIM NB may also be used for curing.

MC-Bauchemie • Am Kruppwald 1-8 • 46238 Bottrop • Tel. +49 (0) 2041-101 10 • Fax: +49 (0) 2041-101 188
info@mc-bauchemie.de • www.mc-bauchemie.de

Technical Data for MC-RIM

Characteristic	Unit	Value*	Comments
Largest grain size	mm	1.5	-
Fresh mortar density	kg/dm³	2.05	-
Bending tensile/ compressive strength	MPa	5.1/21.3 8.8/43.7 11.6/55.7	after 24 hours after 7 days after 28 days
Dynamic E-modulus	MPa	34,700	after 28 days
Diffusion resistance against water vapour	m	2.4	-
Shrinkage	mm/m	0.62	after 28 days
Chloride migration coefficient	m²/s	1.23 x 10^{-12}	
Resistance to water	days	2 1	at + 10 °C at + 20 °C
Coverage	kg/m²/mm	1.80 0.09	MC-RIM dry mortar MC-Additive RBI
Application time	minutes	45 30 20	at + 5 °C at + 20 °C at + 30 °C
Layer thickness**	mm	6 12 24	minimum layer thickness per work step maximum layer thickness per work step maximum total layer thickness
Application conditions	°C	≥ 5 - ≤ 30	air, material and substrate temperature
Curing time	days	5	jute and foil/plastic
Mixing ratio	p. b. w.	100 : 5 9 - 10	MC-RIM : MC-Additive RBI water

Product Characteristics for MC-RIM

Colour	cement-grey
Delivery	MC-RIM: 25 kg bags MC-Additive RBI: 12 kg buckets and 34 kg hobbocks
Storage	Can be stored in cool and dry conditions for at least one year in original unopened packs. Protect MC-Additive RBI from frost!
Disposal	Packs must be emptied completely.

*All values have been determined at 23 °C and 50 % relative humidity.
**Required layer thickness above grain tips.

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

Edition 07/13. 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.

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