



# MC-RIM PROTECT

## Fibre-reinforced and highly sulphate resistant surface protection coating for sewage industry

### Product Properties

- One-component, cement-bound, polymer-modified
- Hand and spray application
- Application by dry spraying using the GUNMIX® technology of Velco
- Resistant to pH 3.35 to pH 14
- Resistant to permanent water exposure and chloride-proof
- Open to water vapour diffusion, impermeable to water
- Certified according to DIN 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)
- Classified according to DIN 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 and XA 1-3

### Application

#### Substrate Preparation

See leaflet "General Application Advice for Coarse Mortars / Concrete Replacement Systems". Pores and blowholes must be opened and filled properly prior to application.

#### Bond Coat

Use of a bond coat is not necessary.

#### 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 or spraying. Hand application is carried out using trowels and truing devices. For spray application variably adjustable worm pumps must be used. Please request our advice or the equipment planner leaflet.

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

#### Finishing

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

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



## Technical Data MC-RIM PROTECT

Characteristic	Unit	Value*	Comment
Largest aggregate	mm	1.2	
Fresh mortar density	kg/dm <sup>3</sup>	approx. 1.99	
Flexural tensile- / Compressive strength	MPa	3.2 / 11.3 6.9 / 38.6 7.0 / 44.4	after 2 days after 7 days after 28 days
Dynamic E-Modulus	MPa	24,000	
Sulphate resistance (SVA-method)	mm/m	0.077	after 91 days
Shrinkage	mm/m	0.8	after 28 days
Chloride migration coefficient	m <sup>2</sup> /s	0.36x10 <sup>-12</sup>	
Water load capacity	days	2 1	at +10 °C at +20 °C
Coverage	kg/m <sup>2</sup> /mm	1.72	MC-RIM PROTECT
Application time	minutes	45 30 20	at + 5 °C at + 20 °C at + 30 °C
Layer thicknesses**	mm	5 15 15	min. layer thickness per work step max. layer thickness per work step max. total layer thickness
Application conditions	°C	≥ 5 - ≤ 35 ≥ 5 - ≤ 30	air- and substrate temperature material 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. Protect from frost.
Disposal	Packs must be emptied completely.

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

\*\* Required layer thickness above grain tips.

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 01/13. 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.