

ombran MHP-SP

Highly sulphate-resistant mortar for coating and re-profiling structures in sewerage systems

Product Properties

- Cement-bounded, polymer-modified, one-component, tricalcium aluminate-free binding agent (C₃A-free)
- Spray and spinning application (fractional hand application)
- Impermeable to water, resistant to freeze and de-icing salt attacks
- Can withstand heavy mechanical loads
- Resistant to very severe sulphate and chloride attack
- Early resistance to water impact
- Suitable as a coating system in public sewerage systems, durable down to pH \geq 3.5: resistant to impacts concrete is exposed in exposition class XA3 according to EN 206
- WW-coating mortar (B1-XWW3) acc. to DIN 19573
- Class R3 according to EN 1504-3 (structural relevant)
- General building supervision approval

Areas of Application

- Coating of concrete and masonry manholes, sewers as well as reservoirs
- Re-profiling of breakouts and defects in manholes, sewers and reservoirs
- Application by wet-spray and spinning technology
- REACH-assessed exposure scenarios: periodical inhalation, application, long-term water contact
- Suitable concerning impacts concrete is exposed to in exposition class XA3, XS3 and XD3 according to EN 1504-3

Application

Substrate Preparation

See the data sheet "General Application Advice for manhole and sewer repair mortars".

Pre-wetting / Bond Coat

See data sheet "General Application Advice for manhole and sewer repair mortars". Only for hand application ombran HB is used as bond coat, the details of the technical data sheet "ombran HB" must be observed.

Mixing

The mineral re-profiling / coating consists of the dry mortar ombran MHP-SP and water. The material can be mixed with slowly running double stirrer or pug mill mixer (pan mixer), before it will be supplied to the spray or spinning application with a screw pump through a hose (inner diameter at least 35 mm). The major part of the water is poured, the dry mortar is added and mixed until homogeneous and lump-free. The remaining water is used to adjust the consistency as necessary. Mixing by hand and mixing of partial quantities is not allowed. Mixing takes at least 3 minutes (depends on mixing technology). For the usage of the ombran MHP-SP with continuous mixers please request special advice.

Mixing Ratio

See "Technical Data" table. Since this material is cement-bound the quantity of water may vary slightly. Also the used mixing and pump technique can have influence on the quantity of water.

Application

Ombran MHP-SP can be applied by spraying or spinning technology. Also a hand application is possible. It can be applied in one or more layers where a thick coating is required. A screw pump with adjustable discharge flow is to be used for spray and spinning application. Please request our assistance or an appropriate equipment planner data sheet.

Curing

During post-treatment, ombran MHP-SP must be protected from excessive water loss for at least 72 h (chem. curing agents e.g. MC-RIM PROTECT C, jute sacking, foil etc.). Particular attention must be given to the relevant effects of temperature and wind. If further coats or other products are to be applied, post-treatment agents with a separating effect must not be used.

Technical Data of ombran MHP-SP

Characteristic	Unit	Value*	Comments
Mixing ratio	p. b. w.	25 : 3.2 - 3.5	ombran MHP-SP : water
Application time	min	approx. 60	
Application conditions	°C	+ 5 to + 30	air, material and substrate temperature
Coverage**	kg/m ² /mm	approx. 1.9	dry mortar
Layer thickness	mm	at least 6 10 - 25 50	as re-profiling mortar per layer as coating mortar max. total layer thickness
Resistant to water after	h	after approx. 3	at + 20 °C
Largest grain size	mm	approx. 2	
Fresh mortar raw density	kg/l	approx. 2.15	
Elastic modulus (static)	MPa	approx. 19,200	after 28 d
Compressive strength	MPa	approx. 4.0 approx. 22.0 approx. 43.5	after 3 h after 24 h after 28 d
Bending tensile strength	MPa	approx. 2.5 approx. 5.0 approx. 7.5	after 3 h after 24 h after 28 d

Product Characteristics of ombran MHP-SP

Colour	grey
Delivery	25 kg bag
Cleaning agent	water
Safety Advice	Please take notice of the safety information and advices given on the packaging labels and safety data sheets. GISCODE: ZP1
Storage	If sealed, the original packs can be stored for at least one year at temperatures between + 5 °C and + 25 °C in dry conditions. The same requirements apply to transport.
Disposal	Make sure the pack is completely empty.

* Unless otherwise stated, all technical data were determined at + 23 °C und 50 % relative air humidity.

** Coverage rates depend on project and surface roughness as well as on the storage and working temperatures and the temperature of the substrate. We recommend to apply a sample area before hand to determine projectspecific quantities.

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 03/20. 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.