



ombran MHP-SP 3000

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

Product Properties

- Cement-bounded, polymer-modified, one-component
- Spray and spinning application (also partial hand application with bond coat ombran HB)
- Impermeable to water
- Can withstand heavy mechanical loads, highly abrasion resistant (Darmstädter Kipprinne)
- Resistant to severe sulphate attack
- Early resistant to water impact
- Resistant to freeze and de-icing salt attacks as well as strong temperature changes
- Suitable as coating system in public sewerage systems, durable down to pH \geq 3.5
- Exposition class XWW4 according to DIN 19573 (WW-mortar for coating); resistant to impacts concrete is exposed to in exposition class XA3 according to EN 206
- Class R4 according to EN 1504-3
- Class B2 according to DIN 19573 (WW-mortar for coating)

Areas of Application

- Coating of concrete and masonry manholes, sewers as well as reservoirs
- Re-profiling of breakouts and defects in manholes, sewers as well as reservoirs
- REACH-assessed exposure scenarios: periodical inhalation, application, long-term water contact

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. Details of technical data sheet "ombran HB" must be observed.

Mixing

The mineral re-profiling / coating consists of the dry mortar ombran MHP-SP 3000 and water. The material can be mixed with slowly running double stirrer or pug mill 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. 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).

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 3000 can be applied by spraying or spinning technology. Also a partial hand application is possible by using the bond coat ombran HB. Fillets have to be applied in corner areas. 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 3000 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 layers or other products are to be applied, post-treatment agents with a separating effect must not be used.

Safety Advice

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

GISCODE: ZP1

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Technical Data of ombran MHP-SP 3000

| Characteristic | Unit | Value* | Comments |
|---|-----------------------|-------------------------------|---|
| Mixing ratio | p. b. w. | 25 : 3.7 - 4.2 | ombran MHP-SP 3000 : water |
| Application time | min | approx. 60 | |
| Application conditions | °C | + 5 to + 30 | air, material and substrate temperature |
| Coverage (areal)** | kg/m ² /mm | approx. 1.9 | dry mortar |
| Layer thickness | mm | approx. 10 - 25 approx. 50 | per work step max. total layer thickness |
| Largest grain size | mm | approx. 2 | |
| Fresh mortar raw density | kg/l | 1.9 - 2.1 | |
| Resistant to water after | h | approx. 3 | at + 20 °C |
| Elastic modulus (static) | GPa | ≥ approx. 25 | after 28 d |
| Strength development Compressive strenght*** | MPa | > 60 | after 28 d (EN 196) |
| Strength development Bending tensile strenght*** | MPa | approx. 6.5 | after 28 d (EN 196) |

Product Characteristics of ombran MHP-SP 3000

| | |
|------------------|---|
| Cleaning agent | water |
| Colour | grey |
| Form of delivery | 25 kg bag |
| 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 project specific quantities.

*** Spray application

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.