

ombran MHP

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)
- Impermeable to water, resistant to freeze and deicing salt attacks as well as strong temperature changes
- Can withstand heavy mechanical loads
- Resistant to very severe sulphate attack
- Rapidly capable of being exposed to water
- Suitable as a coating system in public sewerage systems, durable down to pH \geq 3.5: resistant to impacts concrete is exposed to 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
- Surface levelling in masonry manholes
- Forming of fillets
- 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 / Bonding Agent

See data sheet "General Application Advice for manhole and sewer repair mortars". Ombran HB must be used as the bonding agent. The details of the technical data sheet of ombran HB must be observed.

Mixing

The mineral re-profiling/coating consists of ready-mixed ombran MHP and water. Pour out the major part of the water, scatter the ready-mix mortar on it and mix to a uniform, lump-free consistency. Pug mill mixers and slow-running double stirrers are suitable for mixing the mortar. Mixing by hand and mixing of partial quantities is not allowed. Mixing takes at least 3 minutes.

Mixing Ratio

See "Technical Data" table. About 3.4 to 3.6 litres of water are needed for a 25 kg bag of ombran MHP. Since ombran MHP is cement-bound, the amount of water needed may vary.

Application

Ombran MHP must be applied "fresh on fresh" to the bonding agent using suitable tools (e.g. steel smoothing tool, trowel), compacted and abraded. Where a thick coating is required it may be necessary to apply multiple layers. If afterwards an additional protection material will be applied, roughen the surface of top mortar layer with suitable means (e.g. structuring with a coconut brush or sweeping).

Curing

During post-treatment, ombran MHP must be protected from excessive water loss for at least 72 hours (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.

Safety Advice

Observe the hazard notices and safety advice on the labels and safety data sheets.
GISCODE: ZP1

Technical Data for ombran MHP

Characteristic	Unit	Value*	Comments
Mixing Ratio	p.b.w.	25 : 3.4 - 3.6	ombran MHP : water
Application time	min	approx. 30	
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	approx. 3	at + 20 °C
Largest grain size	mm	approx. 2	
Fresh mortar density	kg/l	approx. 2.16	
Elastic modulus (static)	MPa	approx. 18,500	after 28 d
Compressive strength	MPa	approx. 1.0 approx. 13.0 approx. 25.0 approx. 40.0	after 3 h after 24 h after 7 d after 28 d
Bending tensile strength	MPa	approx. 0.2 approx. 2.5 approx. 3.5 approx. 6.0	after 3 h after 24 h after 7 d after 28 d

Product Characteristics for ombran MHP

Colour	grey
Form of Delivery	25 kg bag
Equipment Cleaner	water
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.
Pack 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 beforehand to determine project-specific 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.