

# ombran MHP rapid

Very fast-setting, highly sulphate-resistant mortar for coating and re-profiling structures in sewerage systems



## PRODUCT PROPERTIES

- Cement-bounded, polymer-modified, one-component C<sub>3</sub>A-free binding agent
- Impermeable to water
- Resistant to freeze and de-icing salt attacks
- Can withstand heavy mechanical loads, highly abrasion resistant, fibre-reinforced
- Resistant to very severe sulphate attack
- Early resistance to water impact
- Suitable as coating system in public sewerage systems, durable down to pH ≥ 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
- WW-jointing mortar (XWW3) acc. to DIN 19573
- WW repair mortar (B2-XWW3, no exposure to weathering) according to DIN 19573
- Class R3 according to EN 1504-3 (structural relevant)

## AREAS OF APPLICATION

- Re-profiling of excavations and defects in manholes, sewers as well as reservoirs
- Small-area coating of concrete and masonry manholes, sewers and reservoirs
- Re-profiling and coating of channel areas in sewerage systems and manholes
- Forming of fillets
- REACH-assessed exposure scenarios: periodical inhalation, application, long-term water contact

## APPLICATION ADVICE

**Substrate preparation:** See the data sheet "General Application Advice for manhole and sewer repair mortars".

**Pre-wetting / Bonding agent:** See the data sheet "General Application Advice for manhole and sewer repair mortars". Use ombran HB as a bonding agent; observe the details of the technical data sheet of ombran HB.

**Mixing:** The mineral re-profiling / coating consists of dry mortar ombran MHP rapid and water. Pour out the major part of the water, scatter the ready-mixed mortar on it and mix it to a uniform, lump-free consistency. Mixing time is approx. 2 minutes. Remaining water might be used to adjust the consistency and could be added on demand to enhance workability. Slow-running double stirrers and pug mill mixers are suitable for mixing ombran MHP rapid. Mixing by hand and mixing of partial quantities is not allowed.

**Mixing Ratio:** Use about 3.75 up to 4.0 liters of water for each 25 kg bag of ombran MHP rapid. Since ombran MHP rapid is cement-bound, the water amount needed may vary.

**Application:** ombran MHP rapid has to be applied "fresh-in-fresh" onto the bonding agent using suitable tools (such as steel smoothing tool, trowel), and has to be compacted and may be abraded. Where a thick coating is required, it might 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 broom or sweeping).

**Curing:** During post-treatment ombran MHP rapid 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 layers of the material or subsequent coating systems are to be applied, the use of separating curing agents must be avoided or the surface must be intensively prepared by blasting to remove remaining curing layers.

## TECHNICAL VALUES & PRODUCT CHARACTERISTICS

Characteristic	Unit	Value	Comments
Mixing ratio	mass fractions	25 : 3.75 - 4	powder component : water
Working time	minutes	≤ 10	at 20° C
Application conditions	°C	≥ 5 ≤ 30	air, substrate and material temperatures
Consumption (flat) <sup>1)</sup>	kg/m <sup>2</sup> /mm	1.9	factory-dried mortar
Consumption (channel area) <sup>1)</sup>	ml/m		
Half-shell DN 250		approx. 7.5	at 10 mm layer thickness
Half-shell DN 500		approx. 14.9	at 10 mm layer thickness
Layer thickness	mm	≥ 6	as a reprofiling mortar
		≥ 10	per layer as coating mortar
		≤ 25	per layer as coating mortar
		50	maximum total layer thickness
Water resistant after	minutes	approx. 45	at 20° C
Maximum grain size	mm	approx. 2	
Fresh mortar bulk density	kg/dm <sup>3</sup>	approx. 2.19	
Compressive strength (strength development)	N/mm <sup>2</sup>		
24 h		≥ 6	
7 d		≥ 40	
28 d		≥ 42.5	
Flexural strength (strength development)	N/mm <sup>2</sup>		
24 h		approx. 2.6	
7 d		approx. 5.3	
28 d		approx. 6.5	
E-modulus (static)	N/mm <sup>2</sup>	approx. 17,900	after 28 days
Accessible after (mechanically)	minutes	approx. 30	at 20° C and 50 % rel. humidity

All technical values are laboratory results determined at 21°C ±2°C and 50% relative humidity.

1) object specific

Equipment cleaning agent	water
Colour	grey
Delivery form	25 kg bag
Storage	Can be stored in original sealed packages at temperatures between 5°C and 25°C in dry conditions for at least 6 months.
Packaging disposal	Make sure single-use containers are completely empty.

### Safety instructions

Please note the safety information and advice given on the packaging labels and safety data sheets. GISCODE : ZP1

**Note:** The information contained in this data sheet is based on our experience and is correct to the best of our knowledge. It is, however, not binding. It will need to be adapted to the requirements of the individual structure, to the specific application and to non-standard local conditions. Application-specific conditions must be checked in advance by the planning engineer/specifier and, where different from the standard conditions indicated, will require individual approval. Technical advice provided by MC's specialist consultants does not replace the need for a planning review by the client or its agents in respect of the history of the building or structure. Subject to this prerequisite, we are liable for the correctness of this information within the framework of our terms and conditions of sale and delivery. Recommendations of our employees deviating from the information given in our data sheets are only binding for us if they are confirmed in writing. In all cases, the generally accepted rules and practices reflecting the current state of the art must be observed. The information given in this technical data sheet is valid for the product supplied by the country company listed in the footer. It should be noted that data in other countries may differ. The product data sheets valid for the relevant foreign country must be observed. The latest technical data sheet shall apply to the exclusion of previous, duly superseded versions; the date of issue in the footer must be observed. The latest version is available from us on request or may be downloaded from our website. [2300018308]