



## RENOVATING MORTAR SM 40



- > Loss-compensating
- > ÖBV quality seal
- > High stability
- > High freeze-thaw resistance
- > Statically relevant R3



### Product description

The Renovating Mortar SM 40 is a cement-bound, freeze-thaw resistant, low-shrinkage concrete repair mortar.

For the manual and mechanical repair of concrete components indoors and outdoors, as well as vertically and overhead.

Renovating Mortar SM 40 meets the requirements of ÖNORM EN 1504-3 and the ÖBV Directive "Conservation and repair of buildings made of concrete and reinforced concrete" as a statically relevant repair mortar with exposure to freeze-thaw conditions (R3, XF4).

- Repair of concrete structures (processes 3.1 and 3.3)
- Improvement or restoration of the load-bearing capacity of concrete structures (process 4.4)
- Preservation and restoration of passivity (processes 7.1 and 7.2)

For surface repairs in layer thicknesses of up to 40 mm per work step (partial repair up to 80 mm possible). Can be applied manually or in a wet spray process.

#### Delivery format

Container	Outer packaging	Pallet
30 KG / PS	-	42 PS
25 KG / PS	-	42 PS

#### Storage

Can be stored frost-free, cool, and dry on wooden shelves in the unopened original container for 730 days

### Processing

#### Recommended tools

Slow-rotating electric agitator, suitable mixing vessel, brick trowel, smoothing trowel, mortar pan, spatula.

## Screed and Mortar technology

### Mixing

Put the recommended amount of water in a clean mixing vessel, add the SM 40 renovating mortar and mix using a slow-rotating agitator until a homogeneous and lump-free blend is obtained (mixing time approx. 3 minutes).

Never use more water than specified for mixing!

### Processing

Process the mixed mortar quickly. Mortar that has already stiffened may not be reprocessed by adding water.

Any anti-corrosion protection applied beforehand must be fully dry before the repair mortar is applied.

When using an adhesive slurry (see the point on substrates), the repair mortar must be applied wet-in-wet to the adhesive slurry.

Processing can take place manually or mechanically (spiral pumps) after mixing. During mechanical processing with a mixing pump, the required amount of water must be determined in advance. Surface finishing, like felting or rubbing, should be carried out without adding water, if possible, so as not to alter the properties of the mortar.

### Post-treatment:

Keep the fresh mortar from drying out too fast by taking appropriate measures (e.g. covering).

### Tool cleaning:

Clean tools and appliances with water immediately after use. Hardened material can only be removed mechanically.

## Technical data

Chemical base	Cements, additives and admixtures
Grain size	4 mm
Consumption	approx. 2.0 kg/m <sup>2</sup> /mm layer thickness
Layer thickness	10 - 40 mm per work step
Certificates/test reports/class achieved	EN 1504-3 R3
Compressive strength	1 day: ~ 10 MPa, 7 days: ~ 30 MPa; 28 days: ~ 50 MPa
Shrinkage behaviour	< 1.2 mm/m (after 90 days)
E-module	> 20 GPa
Object and material processing temperature	min. +5 °C / max. +30 °C
Processing temperature	min. +5 °C / max. +30 °C
Water consumption	approx. 4.25 litres of water per 25 kg of SM 40 renovating mortar
Mixing time	approx. 2 - 3 min.
Solid mortar density	approx. 2.1 kg/dm <sup>3</sup>
Adhesive tensile strength	≥ 1.5 MPa
Fire class	Euroclass A1

## Test certificates

### Tested in accordance with (standard, classification ...)

EN 1504-3 class R3; ÖBV quality seal R3, XF4

16715, RENOVATING MORTAR SM 40, valid from: 01.06.2023, Magdalena Riegler, Page 2

## Substrate

### Suitable substrates

#### Concrete:

The substrate must be clean, solid, load-bearing and free from separating agents and adhesion-reducing components. Old coatings are to be removed. The concrete substrate must have a compressive strength of > 25 MPa and a surface tear strength of at least 1.5 MPa (constructively supplementary R3) or 2.0 MPa (constructively load-bearing R4) as well as a surface roughness of at least 1 mm.

High-pressure water jets or blasting with a solid blasting material are suitable for substrate pre-treatment. Other mechanical substrate pre-treatments (milling or chiselling) lead to structural defects in the concrete and require additional post-processing by blasting.

The concrete substrate must be pre-wetted to capillary saturation at least 12 hours before the application of repair mortar. When applying the repair mortar, the concrete must be matt and damp with no standing water.

**Steel:** Steel surfaces must be clean, solid, load-bearing and free from separating and adhesion-reducing components. Rust must be removed using suitable methods (e.g. high-pressure water jets, blasting with solid blasting material) (Degree of cleanliness of the steel after treatment: SA 2). If the repair concept and process require corrosion protection, Murexin Reinforcement Protection BS 7 should be applied in 2 work steps.

**Adhesive slurry:** Murexin concrete repair mortars do not require any adhesive slurry on well-prepared and pre-wetted substrates. If an adhesive slurry is required, use Murexin HS 1 Adhesive Slurry and apply the repair mortar wet-on-wet.

## Product and processing instructions

#### Material information:

- If processing outside the ideal temperature and/or humidity range the material properties could change markedly.
- Bring the materials to the proper temperature before processing!
- In order to maintain the product properties, do not add any foreign materials!
- Water dosing quantities or dilution information must be strictly adhered to!
- Check tinted products for colour accuracy before application!
- Colour consistency can only be guaranteed within the same batch.
- The colour formation is significantly impacted by the environmental conditions.
- Already mixed material that is beginning to harden may not be diluted further or mixed with fresh material!

#### Environmental information:

- Do not process at temperatures below +5 °C!
- The ideal temperature range for the material, substrate and air is + 15 °C to + 25 °C.
- The ideal relative humidity range is 40% to 60%.
- Increased air humidity and/or lower temperatures may prolong the drying, setting and hardening time, while lower air humidity and/or higher temperatures will speed it up.
- Ensure adequate ventilation during the drying, reaction and hardening phase; avoid draughts!
- Protect against direct sunlight, wind and weather!
- Protect adjacent components!

#### Tips:

- We recommend using a test surface first or a small area for initial, small-scale testing.
- Please heed the product data sheets of all MUREXIN products used in the process.
- Keep a genuine original container of the respective batch for later repair work.
- For heated screeds, a standard heating procedure is required before laying,
- Do not turn on the underfloor heating system during processing and hardening.

The information provided reflects average values that were obtained under laboratory conditions. Due to the use of natural raw materials, the indicated values of individual deliveries may vary slightly without impacting the product suitability.

### Safety instructions

Please refer to safety data sheet for product-specific information with regard to composition, handling, cleaning, corresponding actions and disposal.

Limiting and monitoring exposure

Personal protective equipment:

General protection and hygiene measures:

- Keep away from foodstuffs, beverages and feedstuffs.
- Take off contaminated, impregnated clothing immediately.
- Wash your hands before taking breaks and when finishing work.
- Avoid contact with the eyes and skin.

Breathing protection: not required.

Hand protection: protective gloves.

Glove material

- The selection of a suitable glove depends not only on the material, but also on other quality properties, which may vary from manufacturer to manufacturer. As the product is a preparation made up of many materials, the resistance of glove materials cannot be predicted in advance and must therefore be checked before use.

Penetration time of the glove material

- The precise penetration time is to be found out from the protective glove manufacturer and complied with.

Eye protection: protective goggles.

Body protection: protective clothing.

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Please observe the current, technical, national and European standards, guidelines and data sheets regarding materials, substrates and the subsequent construction.

Please contact us if you have any reservations or doubt. This version is rendered invalid if a new version is released. The most recent data sheets, safety data sheets and the terms and conditions are available online at [www.murexin.com](http://www.murexin.com).