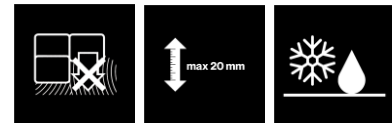




## BetonProtect SM 20 Repair Mortar



- > statically relevant, class R4
- > high freeze-thaw resistance
- > high stability
- > loss-compensating
- > ÖBV quality seal



### Product description

Concrete Reconstruction Mortar SM 20 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 in layer thicknesses of up to 20 mm per process (partially up to 40 mm). SM 20 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 (R4, XF4).

Application:

- 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)

#### Delivery format

Container	Outer packaging	Pallet
25 KG / PS	-	42 PS

#### Storage

Can be stored frost-free, cool, and dry on wooden shelves in the unopened original container for 365 days

### Processing

#### Recommended tools

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

#### Mixing

Put the recommended amount of water in a clean mixing vessel, add the SM 20 and mix using a slow-rotating mixer 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 corrosion protection applied beforehand must be completely dry before the renovation mortar is applied.

When using an adhesive slurry, the renovation mortar must be applied wet-in-wet to the adhesive slurry.

Processing can be undertaken manually or mechanically (spiral pumps) after mixing.

When machine processing with a mixing pump, the required amount of water must be determined in advance.

Surface finishing, such as felting, should take place 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 equipment with water immediately after use. Hardened material can only be removed mechanically.

## Technical data

Chemical base	cements, aggregates and admixtures
Grain size	2 mm
Consumption	approx. 1.9 kg/m <sup>2</sup> /mm layer thickness
Processing time	approx. 45 min.
Compressive strength	1 day: ~ 25 MPa, 7 days: ~ 36 MPa; 28 days: ~ 51 MPa
Shrinkage behaviour	< 1.2 mm/m (after 90 days)
Processing temperature	min. +5 °C / max. +30 °C
Solid mortar density	approx. 2.0 kg/dm <sup>3</sup>
Water consumption	3.75 to 4.00 litres of water per 25 kg of SM 20
Mixing time	approx. 3 min.
Elasticity module	≥ 2.0 GPa
Fire class	Euroclass A1

## Test certificates

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

EN 1504-3 Klasse R4

ÖBV-Gütezeichen R4, XF4

## 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-wet to capillary saturation at least 12 hours before the application of renovating mortar. When applying the renovating mortar, the concrete must be matt and damp, with no standing water.

#### Steel:

Steel surfaces must be clean, solid, stable 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 renovating 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 renovating mortar wet-on-wet.

## Product and processing instructions

### Material instructions:

- When working outside the ideal temperature and/or humidity range, the material properties may change significantly.
- Bring the materials to the correct temperature before processing!
- To retain the product properties, no foreign materials may be mixed in!
- Water addition amounts or dilution instructions may be precisely kept!
- Check the colour accuracy of coloured products before use!
- Colour consistency can only be guaranteed within a batch.
- Environmental conditions may significantly affect colouration.
- Mixed material that has already started to stiffen may not be diluted further or replaced with fresh material!

### Environmental information:

- Do not process at temperatures below +5 °C!
- The ideal temperature range for material, substrate and air is +15°C to +25°C.
- The ideal relative air humidity range is between 40% to 60%.
- Increased humidity and/or lower temperatures delay, lower air humidity and/or higher temperatures accelerate drying, setting and hardening.
- Ensure sufficient ventilation during the drying, reaction and hardening phase; avoid draughts!
- Protect from 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.
- Observe the product data sheets of all MUREXIN products used in the system.
- Keep a genuine original container of the respective batch for later repair work.
- For heated screeds, a standard heating procedure must take place before laying.
- The underfloor heating system may not be switched on during the processing and hardening.

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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

Product-specific information regarding composition, handling, cleaning, appropriate measures and disposal can be found in the safety data sheet.

Limiting and monitoring exposure

Personal protective equipment:

General protection and hygiene measures:

- Keep away from foodstuffs, beverages, and feedstuffs.
- Immediately take off dirty, soaked clothing.
- Wash hands before breaks and when finishing work.
- Avoid contact with the eyes and the skin.

Respiratory protection:

- Not required if the room is well ventilated.

Protection of hands: Protective gloves.

Glove material

- Butyl rubber.
- Nitrile rubber.

Penetration time of the glove material

- The precise penetration time must be obtained from the protective glove manufacturer and complied with.

Eye protection: Protective glasses.

Body protection: Occupational 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.

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