



## KÖSTER BD 50

Technical Data Sheet B 290 010

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- Test report 857/18/SG from the "Institute of Ceramics and Building Materials" Krakau, Poland according to DIN EN 14891

### Solvent-free elastic waterproofing for damp- and wet rooms under tile

	<p><b>KÖSTER BAUCHEMIE AG</b>  <b>Dieselstraße 1-10, 26607 Aurich</b>  <b>18</b>  <b>B 290</b>  <b>EN 14891:2012</b>  <b>Liquid applied water</b>  <b>impermeable product for</b>  <b>external installations on walls</b>  <b>and floors, beneath ceramic</b>  <b>tiling</b></p>
Initial tensile adhesion strength	≥ 0.5 N/mm <sup>2</sup>
Tensile strength after contact with water	≥ 0.5 N/mm <sup>2</sup>
Tensile adhesion strength after heat aging	≥ 0.5 N/mm <sup>2</sup>
Tensile adhesion strength after freeze-thaw cycles	≥ 0.5 N/mm <sup>2</sup>
Tensile adhesion strength after contact with lime water	≥ 0.5 N/mm <sup>2</sup>
Crack bridging ability	≥ 0.75 mm
Waterproofing	No penetration

Impermeable to water under pressure at 150 kPa (EN 14891)

Number of layers  
 Airing time to hand touch  
 Application of next layer  
 Drying time before tiling

No penetration  
 min. 2 layers  
 approx. 2 hours  
 approx. 3 hours  
 approx. 20 h after application of second layer

#### Fields of Application

KÖSTER BD 50 forms a seamless- waterproofing layer under tile and coverings on wall- and floor areas in damp and wet rooms, e.g. in showers, bathrooms, kitchens, car washes, garages, etc. KÖSTER BD 50 is the area waterproofing layer under tile as part of the KÖSTER BD 50 System certified according to DIN EN 14891.

#### Substrate

Suitable substrates include concrete, masonry, mineral plasters, porous concrete, fiberboards, gypsum, gypsum plaster boards and gypsum fiber boards, cement-, anhydrite- and magnesite screeds and all kinds of ceramic coverings.

The substrate should be dry to slightly damp, solid, clean, free of oil and grease, loose particles, moss, algae, and any bond-inhibiting agents. We recommend roughening of non-absorbent surfaces such as glazed tiles by sanding prior to the application of the primer and waterproofing coat.

Salt burdened substrates require priming with KÖSTER Polysil TG 500 (consumption: approx. 100 - 250 g/m<sup>2</sup>). All other substrates are primed with KÖSTER BD Primer.

Prime lightly absorptive substrates such as pre-cast concrete, fiber cement boards, and cement screeds with approx. 50 g/m<sup>2</sup> of KÖSTER BD Primer. Wait 3 hours before applying KÖSTER BD 50.

Prime highly absorptive substrates such as sandstone, gypsum, light-weight concrete, and gypsum plasters with approx. 150 g/m<sup>2</sup> of KÖSTER BD Primer. Wait 3 hours before applying KÖSTER BD 50.

#### Features

KÖSTER BD 50 is a ready-for-use, solvent-free and easy to apply sealing compound for waterproofing surfaces under tile and coverings in damp and wet rooms. Once applied to the substrate, it cures to a highly flexible, waterproof synthetic foil which is highly elastic and crack-bridging. All customary solvent-free, flexible tile adhesives can be applied on top of KÖSTER BD 50. The tile can be laid using the thick-bed or the standard thin-bed method.

#### Technical Data

Viscosity	pasty
Density	approx. 1.50 g / cm <sup>3</sup>
Application temperature above	+ 5 °C
Color	light grey
Solid content	72%
Rel. humidity during application	max. 85%
Wet layer thickness 1st and 2nd coat	0.8 mm (1.2 kg/m <sup>2</sup> )
Thickness of cured coat	0.5 mm (1.2 kg/m <sup>2</sup> )
Water vapor diffusion	7.6 g / m <sup>2</sup> / 24h
Breaking load (N/mm <sup>2</sup> )	1.0 N / mm <sup>2</sup>
Elongation at break	150%
pH	9
Crack bridging (EN 14891)	≥ 0.75 mm
Adhesion after freeze/thaw (EN 14891)	≥ 0.5 N/mm <sup>2</sup>
Adhesion after water immersion (EN 14891)	≥ 0.5 N/mm <sup>2</sup>
Adhesion after contact with lime water (EN 14891)	≥ 0.5 N/mm <sup>2</sup>

#### Application

Primer: 1 x 0.1 - 0.25 kg/m<sup>2</sup> KÖSTER Polysil TG 500 (salt burdened substrates)

Primer: 1 x 0.05 - 0.15 kg/m<sup>2</sup> KÖSTER BD 50 Primer (all other substrates)

Waterproofing: 2 x KÖSTER BD 50 (0.4 - 0.6 kg/m<sup>2</sup> per coat depending on the substrate)

- Fill voids and defects smaller than 5 mm with KÖSTER BD 50. In the case of cracks > 0.5 mm bridge the crack with KÖSTER BD Flex Tape 120 adhered with KÖSTER BD 50. Completely cover the KÖSTER BD Flex Tape 120.
- Defects larger than 5 mm should be filled flush with KÖSTER Repair Mortar Plus. Allow to cure for 24 hours before priming and applying KÖSTER BD 50.
- Suitable surface preparation methods include water jetting, sandblasting, shotblasting, or grinding. Apply the proper primer appropriate to the substrate and conditions. Concrete substrates must cure for a minimum of 28 days before application.

The information contained in this technical data sheet is based on the results of our research and on our practical experience in the field. All given test data are average values which have been obtained under defined conditions. The proper and thereby effective and successful application of our products is not subject to our control. The installer is responsible for the correct application under consideration of the specific conditions of the construction site and for the final results of the construction process. This may require adjustments to the recommendations given here for standard cases. Specifications made by our employees or representatives which exceed the specifications contained in this technical guideline require written confirmation. The valid standards for testing and installation, technical guidelines, and acknowledged rules of technology have to be adhered to at all times. The warranty can and is therefore only applied to the quality of our products within the scope of our terms and conditions, not however, for their effective and successful application. This guideline has been technically revised; all previous versions are invalid.

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# KÖSTER

## Waterproofing Systems

- As part of the KÖSTER BD 50 System, details such as corners, wall-floor junctions, pipe penetrations and drainage systems are reinforced with custom accessories provided for each detail and embedded directly over the respective area using KÖSTER BD 50.
- KÖSTER BD Flex Tape 120 - for the reinforcement of wall/floor joints and cracks
- KÖSTER BD Internal Corner - for the reinforcement of all inside corners
- KÖSTER BD External Corner - for the reinforcement of all outside corners
- KÖSTER BD Floor Sleeve - for the reinforcement of shower and bath drains
- KÖSTER BD Wall Sleeve - for the reinforcement of pipe penetrations
- In areas susceptible to cracking or to strengthen the waterproofing according to project needs, KÖSTER Flex Fabric can be embedded into the fresh first layer of KÖSTER BD 50. Under normal conditions, area reinforcement is not required.
- The second and final layer of KÖSTER BD 50 can be mixed with a signal pigment provided by KÖSTER to visually control the quality and evenness of the second layer, insuring the waterproofing is properly done.

### Mixing and tools

- KÖSTER BD 50 is a 1 component, ready to use product
- The material must be well homogenized in the original bucket before using
- The application can be carried out by brush, roller, or airless spray equipment
- A 1 m<sup>2</sup> test area can be applied to determine the consumption of primer and material

### Notice

- Do not apply KÖSTER BD 50 on damp cementitious substrates or on substrates which are subject to rising damp
- Whenever necessary, sloped surfaces should be created in order to avoid puddle formation
- Do not apply KÖSTER BD 50 alone to cover and protect cracks in the substrate
- KÖSTER BD 50 must be protected from mechanical damage by the use of ceramic or stone tiles
- The final dry thickness of KÖSTER BD 50 must be at least 0.5 mm in order to form a consistent, continuous flexible coat
- No gaps or cracks in the substrate are acceptable
- For best results, always use KÖSTER BD Flexible Tile Adhesive for laying and adhering tiles

### Consumption

Approx. 1.2 kg / m<sup>2</sup>

Per coat: approx. 0.4 - 0.6 kg/m<sup>2</sup>.

0.8 - 1.2 kg/m<sup>2</sup> total consumption

When applying the material with a roller, multiple coats may be necessary.

### Cleaning

Clean tools immediately after use with water. Cured material must be mechanically cleaned.

### Packaging

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10 kg bucket

### Storage

Store the material cool but frost free. In originally sealed packages it can be stored for a minimum of 12 months.

### Safety

Observe all local, state, and federal safety guidelines when applying the material.

### Related products

KÖSTER BD 50 Primer	Prod. code B 190 005
KÖSTER BD Flexible Tile Adhesive	Prod. code B 540 025
KÖSTER BD Flex Tape K 120	Prod. code B 931
KÖSTER BD Inside Corner	Prod. code B 932 001
KÖSTER BD Outside Corner	Prod. code B 933 001
KÖSTER BD Wall Sleeve	Prod. code B 934 001
KÖSTER BD Floor Sleeve	Prod. code B 935 001
KÖSTER Polysil TG 500	Prod. code M 111
KÖSTER Superfleece	Prod. code W 412
KÖSTER Flex Fabric	Prod. code W 450 100
KÖSTER SB Bonding Emulsion	Prod. code W 710

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