

Method Statement

# Positive side waterproofing with KÖSTER NB Elastic Grey



# // Table of Contents

<b>1</b>	<b>General information</b>	<b>4</b>
1.1	Scope	4
1.2	Manufacturer	4
1.3	Definitions	4
<b>2</b>	<b>System Description</b>	<b>5</b>
2.1	System features	5
2.1.1	Characteristics/Advantages	5
2.2	Main products and components	6
2.3	Associated products	7
2.4	Associated literature	7
<b>3</b>	<b>Tools and equipment</b>	<b>8</b>
3.1	Tools	8
3.2	Equipment	8
3.3	Cleaning	8
<b>4</b>	<b>Environmental, health and safety</b>	<b>9</b>
4.1	Personal Protection Equipment (PPE)	9
4.2	Material safety & First Aid	10
4.3	Waste disposal	10
<b>5</b>	<b>Fields of application</b>	<b>11</b>
5.1	General examples	11
5.2	Example: Waterproofing balconies and terraces under tiles	11
5.3	Example: Waterproofing of swimming pools before laying ceramic tiles	12
<b>6</b>	<b>Substrate preparation</b>	<b>13</b>
6.1	Project site conditions	13
6.1.1	Application temperature	13
6.1.2	Moisture content in substrate	13
6.1.3	Relative humidity	13
6.1.4	Rain and frost	13
6.2	Substrate requirements	13
6.3	Substrate quality testing	13
6.3.1	Scratch test	13
6.3.2	Wipe test	13

# // Table of Contents

6.3.3	Water test	13
6.4	Surface preparation	14
6.4.1	Concrete surfaces	14
6.4.2	Masonry	15
6.5	Levelling & preparing the surface	15
6.5.1	New construction	15
6.5.2	Old construction	15
6.6	Corners & fillets	16
6.7	Priming the substrate	16
<b>7</b>	<b>Application/Installation instructions</b>	<b>17</b>
7.1	Mixing	17
7.2	Brush application	17
7.3	Trowel application	18
7.4	Spray application	18
7.4.1	Using KÖSTER Peristaltic Pump	18
7.4.2	Using b&m BMP7 screw pump	18
7.5	KÖSTER Flex Fabric as a reinforcement	19
7.6	KÖSTER Glass Fiber mesh as a reinforcement	19
7.7	Surface Details	20
7.7.1	Connections to wall, doors, window frames	20
7.7.2	Pipe penetrations	20
7.7.3	Moving joints	21
<b>8</b>	<b>General consumption guidelines</b>	<b>21</b>
<b>9</b>	<b>Quality control</b>	<b>22</b>
9.1	Quality control for dry film thickness	22
9.2	Quality control for final layer thickness	22
<b>10</b>	<b>General notes</b>	<b>22</b>
10.1	Material storage	22
10.2	Packaging	22
<b>11</b>	<b>Certifications</b>	<b>23</b>
<b>12</b>	<b>Appendix</b>	<b>23</b>
<b>13</b>	<b>Legal disclaimer</b>	<b>24</b>

# 1 General information

## 1.1 Scope

This method statement is intended for use by developers, contractors and applicators as a general guideline for the application of the waterproofing system KÖSTER NB Elastic Grey. While this document describes the tools, equipment, materials and process for preparing and

installing the waterproofing system, it must be used and referred to, in combination with all other relevant technical information available for the product and its components.

## 1.2 Manufacturer

KÖSTER BAUCHEMIE AG

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**KÖSTER**  
Waterproofing Systems

## 1.3 Definitions

### Absorption

The process by which one substance, such as a solid or liquid, takes up another substance, such as a liquid or gas, through minute pores or spaces between its molecules. An absorption process is generally reversible.

### Crack-bridging

Crack-bridging waterproofing means that a waterproofing system remains intact even though the substrate has cracked. Often “crack-bridging” is confused with “elastic”. An elastic material may be far from waterproof when stretched. An elastic material may also be waterproof under normal circumstances, but not once water pressure is applied.

### Elasticity

It is the ability of a body to resist a distorting influence and to return to its original size and shape when that influence or force is removed. Solid objects will deform when adequate loads are applied to them; if the material is elastic, the object will return to its initial shape and size after removal of the influence.

### Elongation at break

It is a measurement that shows how much a material can be stretched — as a percentage of its original dimensions — before it breaks. This is also referred to as percent elongation, which is a measurement of the amount a material will plastically and elastically deform up to fracture. The material's final length is compared with its original length to determine the percent elongation and the material's ductility.

### Positive Side Waterproofing

Positive side waterproofing means that the waterproofing layer is applied to the side of the construction member which is in direct contact to the water.

## 2 System description

### 2.1 System features

KÖSTER NB Elastic Grey is a waterproof, elastic, wear resistant coating with excellent adhesion to all mineral substrates. The material can bridge cracks up to a width

of 2 mm, is abrasion resistant, and resistant to corrosive liquids such as dilute acids and alkalis. It possesses a good UV-resistance.

#### 2.1.1 Characteristics/Advantages

- Crack-bridging up to 2 mm
- Resistant to foot traffic
- Suitable for moist surfaces
- Ideal for balconies and terraces under tiles
- Together with KÖSTER NB 1 Grey suitable for negative side waterproofing
- Cement based system
- Suitable for mineral substrates such as concrete and brick walls
- Elastic material
- Resistant to abrasion and corrosive liquids



## 2.2 Main products and components



### Primer KÖSTER Polysil TG 500

Low viscous, substrate solidifying, salt binding, and hydrophobizing combination product on a polymer/silicate basis for the protection of mineral substrates and priming of mineral substrates before waterproofing with cementitious waterproofing slurries, PMBC, and installation of restoration plasters.

[See online](#)



### Surface repair KÖSTER WP Mortar

Watertight, trowel applicable, fast setting mineral mortar for reprofiling surfaces and resistant to pressurized water when applied in a layer thickness of 4 mm. It cures quickly and is characterized by high pressure and abrasion resistance, high chemical resistance, and resistant against salts in the substrate.

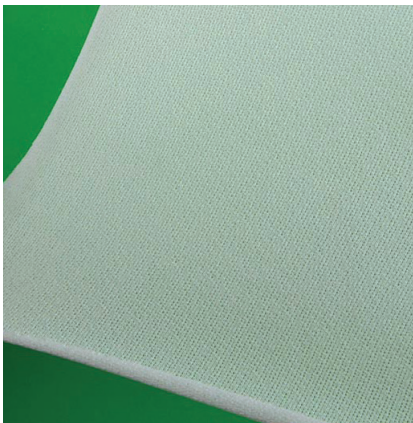
[See online](#)



### Negative side waterproofing KÖSTER NB 1 Grey:

Watertight mineral waterproofing with subsequently crystallizing agents. Suitable for positive side and negative side waterproofing. KÖSTER NB 1 Grey possesses excellent pressure and abrasion resistance, as well as chemical and sulphate resistance. Approved by the building authorities and tested in accordance with the potable water guidelines. For area waterproofing in new construction and restoration, e.g. waterproofing of basements and tanks.

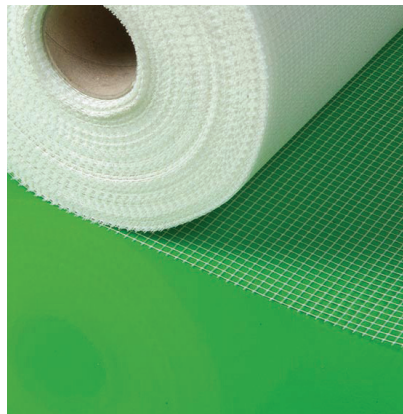
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### Reinforcement KÖSTER Flex Fabric

Highly flexible, tear-resistant finely woven, synthetic fabric for the reinforcement of thin-layer waterproofing, especially in areas prone to cracking, penetrations or wall/floor connections.

[See online](#)



### Reinforcement KÖSTER Glass Fiber Mesh

Highly tear resistant mesh for the reinforcement of waterproofing layers especially in the case of pressurized water, areas in danger of cracking as well as connections, wall/floor junctions and fillets. Resistant to dislocation, alkalis, plasticizer-free.

[See online](#)



### Positive side waterproofing KÖSTER NB Elastic Grey

2-component waterproofing system, able to bridge cracks up to 2 mm and is resistant to pressurized water. It is suitable for the waterproofing of balconies, terraces, and crack-bridging waterproofing of concrete elements, also under tiles.

[See online](#)

## 2.3 Associated products



**KÖSTER Polysil  
TG 500**

[See online](#)



**KÖSTER WP Mortar**

[See online](#)



**KÖSTER NB 1 Grey**

[See online](#)



**KÖSTER Flex Fabric**

[See online](#)



**KÖSTER Glass  
Fiber Mesh**

[See online](#)



**KÖSTER Repair Mortar**

[See online](#)



**KÖSTER Repair  
Mortar Plus**

[See online](#)



**KÖSTER SB Bonding  
Emulsion**

[See online](#)



**KÖSTER Brush  
for slurries**



[See online](#)



**KÖSTER Peristaltic Pump**

[See online](#)

## 2.4 Associated literature

- [System brochure External Basement Waterproofing](#) 
- [Product Declaration of Performance  
KÖSTER NB Elastic Grey](#) 

# 3 Tools and Equipment

## 3.1 Tools



**KÖSTER** Brush for slurries



**Rounded trowel**



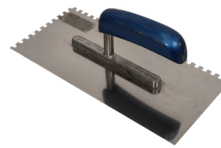
**Trowel**



**Mixing vessels (30 l)**



**Finishing trowel**



**Notched trowel**

## 3.2 Equipment



**Single paddle mixer**



**KÖSTER** Peristaltic Pump  
(optional for spray application)



**Pressure sprayer**



**BMP 7 Pump**

## 3.3 Cleaning

Clean all tools and equipment immediately after use with water. Cured and hardened material can only be removed mechanically.



## 4 Environmental, health and safety

### 4.1 Personal Protection Equipment (PPE)

The following is a short overview of Personal Protective Equipment and serves only as a guideline. Contractors and Employers are responsible for meeting the occu-

pational safety guidelines in their countries, states, and localities.



#### Eye protection

Employers must be sure that their employees wear appropriate eye and face protection and that the selected form of protection is appropriate to the work being performed and properly fits each worker exposed to the hazard.

#### Head protection

Employers must ensure that their employees wear head protection if any of the following apply: Objects might fall from above and strike them on the head; they might bump their heads against fixed objects, such as exposed pipes or beams; or there is a possibility of accidental head contact with electrical hazards.

#### Foot and Leg Protection

Employees who face possible foot or leg injuries from falling or rolling objects or from crushing or penetrating materials should wear protective footwear.

#### Hand Protection

When selecting gloves to protect against exposure hazards, always check with the manufacturer or review the manufacturer's product literature to determine the gloves' effectiveness against specific workplace chemicals and conditions. Gloves commonly used are: Coated fabric gloves and Chemical - and Liquid - Resistant Gloves

#### Hearing protection

Suitable hearing protection must be provided for the job environment.

## 4.2 Material safety & First Aid

Every KÖSTER product is labeled with specific information and symbols as to the related dangers. Please consult the respective Material Safety Data Sheet for specifics.

### **If inhaled:**

Remove person to fresh air and keep comfortable for breathing. In all cases of doubt, or when symptoms persist, seek medical advice. Inhalation of dust may cause irritation of the respiratory system.

### **After ingestion:**

Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Call a physician in any case!

### **After contact with skin:**

Wash immediately with plenty of water. Change contaminated clothing. The product develops an alkaline pH value with moisture and can cause irritation. Contains chromium (VI). May produce an allergic reaction.

### **In case of contact with eyes:**

Rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist. Following eye contact: Risk of serious damage to eyes.

### **In case of accident or if you feel unwell:**

Seek medical advice immediately (show the label if possible). Treat symptomatically.

## 4.3 Waste disposal

### **Disposal recommendations**

Dispose of waste according to applicable legislation.

### **List of Wastes Code -**

#### **Residues/unused products (200128)**

MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); paint, inks, adhesives and resins other than those mentioned in 20 01 27.

### **Contaminated packaging**

Completely emptied packages can be recycled.

### **List of Wastes Code -**

#### **Used product (170107)**

CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES); concrete, bricks, tiles and ceramics; mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06 according to German regulations.

# 5 Fields of application

## 5.1 General examples

- Waterproofing balconies and terraces under tiles
- Waterproofing of water retaining channels, faces of dams over KÖSTER NB 1 Grey, basins, and tanks
- Waterproofing plasterboard, render or cementitious surfaces, lightweight cement blocks, and marine-grade plywood
- Protection of cementitious renders or concrete with cracks due to shrinkage and against water infiltration
- Protection of concrete pillars and beams against the penetration of carbon dioxide
- Waterproofing swimming pools before laying ceramic tiles
- Protection of structures with an inadequate layer of concrete over the reinforcement rods against the penetration of aggressive elements
- Flexible protection layer of new concrete structures or repaired structures
- Protection of concrete surfaces which may come into contact with sulfates, sea water, and de-icing salts such as sodium or calcium chloride

## 5.2 Example: Waterproofing balconies and terraces under tiles



- |                           |   |
|---------------------------|---|
| 1. Substrate              | Concrete  |
| 2. Concrete repair        | KÖSTER Betomor Multi A<br>KÖSTER Repair Mortar R4<br>KÖSTER Z 1<br>KÖSTER Z 2 |
| 3. Primer                 | KÖSTER SL Primer  |
| 4. Levelling underlayment | KÖSTER SL Protect   |
| 5. Primer                 | KÖSTER Polysil TG 500   |
| 6. Waterproofing layers   | KÖSTER NB Elastic Grey  |
| 7. Reinforcement          | KÖSTER Flex Fabric<br>KÖSTER Glass Fiber Mesh                                 |
| 8. Tile adhesive          | KÖSTER BD Flexible Tile Adhesive  |
| 9. Tiles                  |   |

### Installation process:

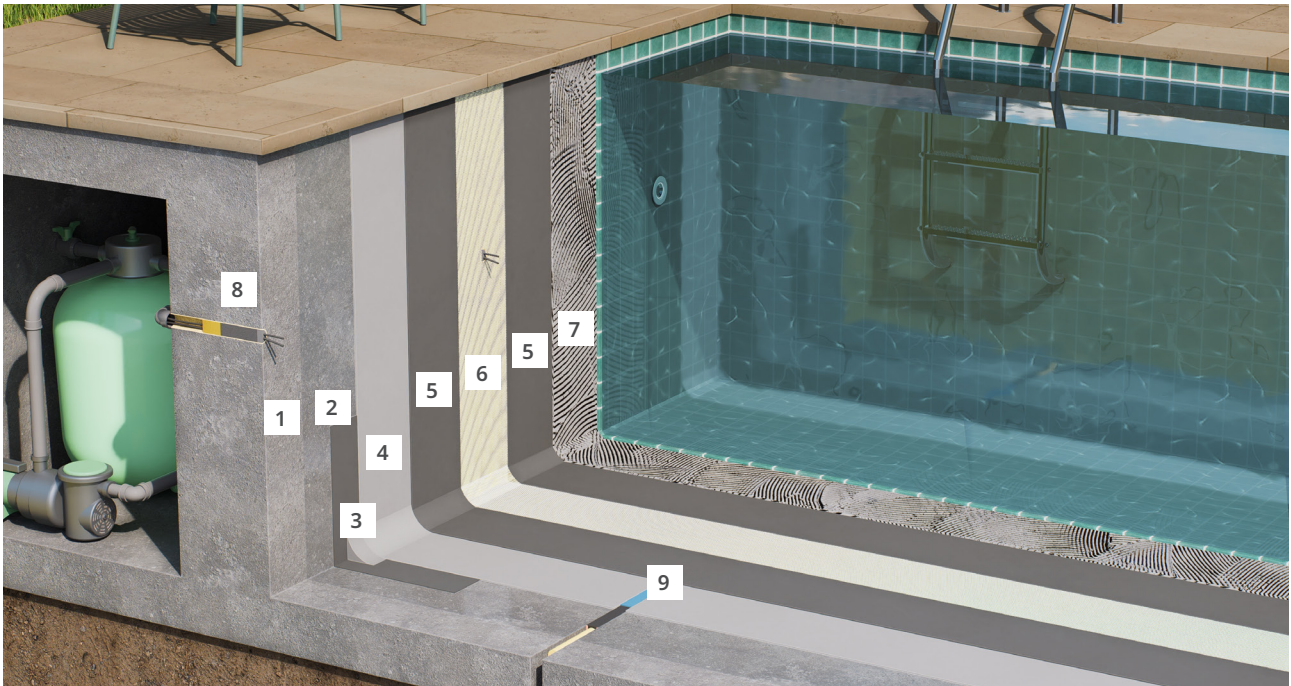
The concrete surface must be mechanically cleaned and prepared until a solid substrate is achieved. Before installing the waterproofing system, concrete repair work is done with e.g. KÖSTER Betomor Multi A or with KÖSTER Z 1 and Z 2 and KÖSTER Repair Mortar R4. The concrete surface must be primed with water before applying the repair mortar.

To level the surface, self-leveling underlayment KÖSTER SL Protect is highly recommended. Therefore use as a primer the KÖSTER SL Primer.

KÖSTER Flex Fabric is embedded into the fresh first waterproofing layer in the wall-floor transition and in all areas at risk of cracking. The full-surface reinforcement is achieved by embedding KÖSTER Glass Fiber Mesh into the fresh first waterproofing layer.

The final wearing layer with the installation of tiles can be carried out with the flexible adhesive KÖSTER BD Flexible Tile Adhesive.

### 5.3 Example: Waterproofing of swimming pools before laying ceramic tiles



- |                                |                                       |
|--------------------------------|---------------------------------------|
| 1. Substrate                   | Concrete                              |
| 2. Primer                      | KÖSTER Polysil TG 500                 |
| 3. Fillet                      | KÖSTER WP Mortar                      |
| 4. Negative side waterproofing | KÖSTER NB 1 Grey                      |
| 5. Positive side waterproofing | KÖSTER NB Elastic Grey                |
| 6. Reinforcement               | KÖSTER Glass Fiber Mesh               |
| 7. Tile adhesive               | KÖSTER BD Flexible Tile Adhesive      |
| 8. Penetrations                | KÖSTER KB-Flex 200<br>KÖSTER KB-Fix 5 |
| 9. Joint sealing               | KÖSTER Joint Sealant FS               |

### Installation process:

The system is applied to substrates that are sound and solid as well as free from bond inhibiting agents. As primer, KÖSTER Polysil TG 500 is used. It hardens the substrate and reduces the mobility of salts. The installation of a fillet at the wall-floor junction is done with KÖSTER WP Mortar to prevent stresses in the subsequent waterproofing layers. The negative side waterproofing is achieved by applying two coats crosswise of KÖSTER NB 1 Grey as a first waterproofing barrier.

Applying two perpendicular coats of the crack-bridging

KÖSTER NB Elastic Grey guarantees a secondary barrier with positive side waterproofing protection. The installation of KÖSTER Glass Fiber Mesh is recommended between the first and second layer of the KÖSTER NB Elastic Grey to enhance the movement resistance. The tiling can then be performed with the single component and flexible adhesive KÖSTER BD Flexible Tile Adhesive. Pipe penetrations are waterproofed using KÖSTER KB-Flex 200 and sealed with KÖSTER KB-Fix 5. Joints are sealed with KÖSTER Joint Sealant FS.

# 6 Substrate preparation

## 6.1 Project site conditions

### 6.1.1 Application temperature

The waterproofing system should be applied at temperatures between +2 °C and +30 °C. Do not apply cementitious waterproofing when the temperature is lower than +2 °C or expected to fall below this temperature within 24 hours from time of application. Do not apply the material in direct sunlight with temperatures over +30 °C.

### 6.1.2 Moisture content in substrate

The substrate must be prepared in such a way that it does not absorb water from the fresh coating. This can be achieved either by pre-wetting the substrate or by applying a primer like KÖSTER Polysil TG 500 to it.

When pre-wetting, the surface must be wet enough that it will remain damp for at least 10 minutes directly before being coated. Avoid standing water.

### 6.1.3 Relative humidity

Relative humidity should not exceed 95 % as it may affect the final results and curing process. Low levels of relative humidity increase the risk of water evaporation from the material, consequently increasing the risk of premature drying and shrinkage cracking.

### 6.1.4 Rain and frost

The waterproofing coating must not be exposed to mist, rain, intense heat, snow, frost and strong wind during the application and until it has fully cured.

## 6.2 Substrate requirements

The mineral substrate must be sound and solid as well as free of bonding inhibiting agents such as grease or oil. Remove all bond breaking substances such as old coats, laitance, loose particles, dust, formwork, release oil, etc. The substrate must be open pored so that the KÖSTER

NB Elastic Grey can be installed and create a secure bond to the substrate. The substrate must also be free of silicate sealer, waxes, and silicate curing compounds as well as all forms of gypsum.

## 6.3 Substrate quality testing



### 6.3.1 Scratch test

Scratch the substrate with a nail or something similar. If particles come off the surface or if the fingernail can penetrate the substrate, remove the entire weak or sinter layer.



### 6.3.2 Wipe test

Wipe with your hand over the substrate. If no particles become detached and if the hand remains clean, then the substrate is acceptable.



### 6.3.3 Water test

To evaluate the absorptiveness of the substrate, wet the substrate. Water which is applied to the substrate must not roll off the surface but it must distribute within a short period of time. Dripping moisture indicates residues of release agents. These must also be removed.

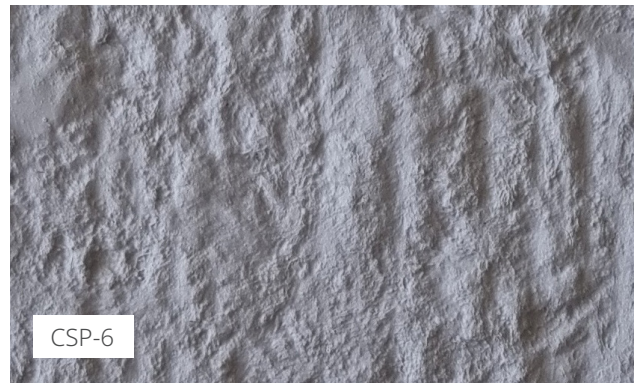
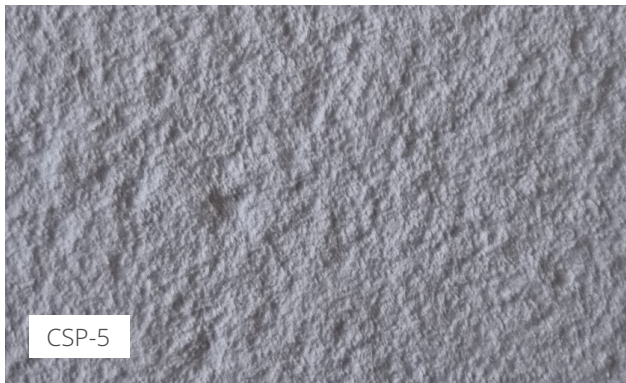
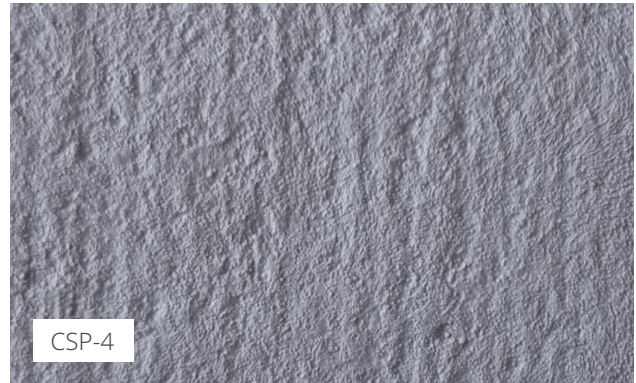
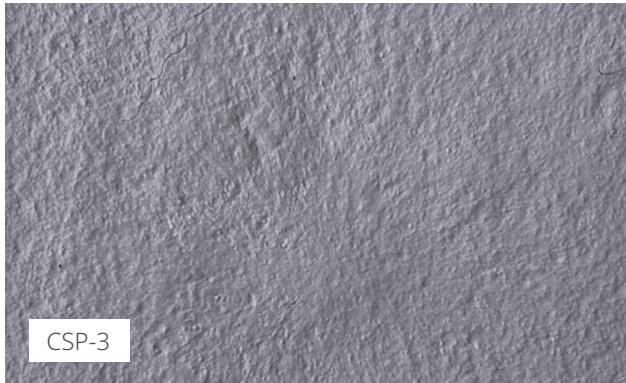
## 6.4 Surface preparation

### 6.4.1 Concrete surfaces

Concrete surfaces must be prepared to have an open pore surface free of laitance. The surface roughness must present a structure corresponding to a Concrete Surface Profile CSP-3, CSP-4, CSP-5 or CSP-6; according to the guidelines by the International Concrete Repair

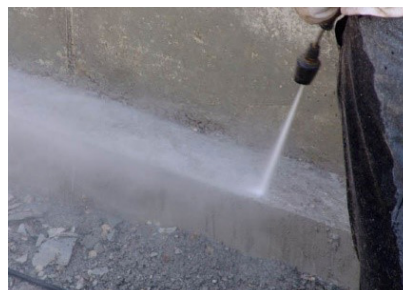
Institute (ICRI). The surface must then be intensively cleaned prior to the installation.

Suitable surface preparation methods are grinding, high-pressure water blasting (at least 350 bar) and sandblasting/shotblasting.



#### Grinding

Suitable for creating a CSP-1 to CSP-3.



#### High-pressure water blasting

(at least 350 bar)  
Suitable for creating a CSP-3 to CSP-10. In case there is formwork release oil on the surface, apply a suited detergent to the surface before cleaning with the water jet.



#### Sandblasting or shotblasting

Suitable for creating a CSP-2 to CSP-8.

## 6.4.2 Masonry

Masonry walls must be mechanically cleaned and freed from efflorescence prior to the application of the KÖSTER NB Elastic Grey. Uneven brick or block work must be first rendered flush with KÖSTER Repair Mortar Plus en-



hanced with KÖSTER SB-Bonding Emulsion. Masonry can be also prepared with a scratch coat of the KÖSTER NB Elastic Grey.



## 6.5 Levelling & preparing the surface

### 6.5.1 New construction

It is necessary to prepare the substrate correctly to achieve the guaranteed durability. The edges must be rounded with appropriate tools and the surface of the walls must be intensively cleaned with high-pressure water to be cleared of any adhesion-inhibiting substances. The surface roughness must be levelled according to the depth.

Level surfaces with a surface roughness depth  $\geq 5$  mm (i.e. voids and any irregularities in joints or breakouts) with KÖSTER Repair Mortar Plus or KÖSTER Repair Mortar with the addition of a maximum of 30 % KÖSTER SB Bonding Emulsion added to the mixing water.

### 6.5.2 Old construction

Clean the surface with high pressure water jet (approx. 400 bar) following proper methods to clear any adhesion-reducing materials. Old coatings must be removed down to a clean mineral substrate.

Protect elements exposed to negative water pressure, as well as, strongly moistened substrates where the moisture is visible and the color of the surface is dark due to moisture by applying KÖSTER NB 1 Grey at least one day prior to waterproofing.

Clean the joints in masonry from loose grout and mortar approx. 2 cm deep and subsequently fill with KÖSTER Repair Mortar Plus with a maximum of 30 % KÖSTER SB Bonding Emulsion added to the mixing water.

In case of surface roughness depth  $\leq 5$  mm or by negative side water incursion (i.e. surface irregularities, unevenness or small defects and break outs etc.) level the surface with KÖSTER NB 1 Grey with the addition of KÖSTER NB 1 Flex in the mixing water, applied with the KÖSTER Brush for Slurries.

Prime mineral substrates with KÖSTER Polysil TG 500 using a large brush or spray pump. Weakly absorbent or non-absorbent substrates must be pre-wet with water until they are moist.

Level rough surfaces with a surface roughness depth  $\geq 5$  mm (i.e., voids and any irregularities in joints or breakouts) with KÖSTER Repair Mortar Plus or KÖSTER Repair Mortar with a maximum of 30 % KÖSTER SB Bonding Emulsion added to the mixing water.

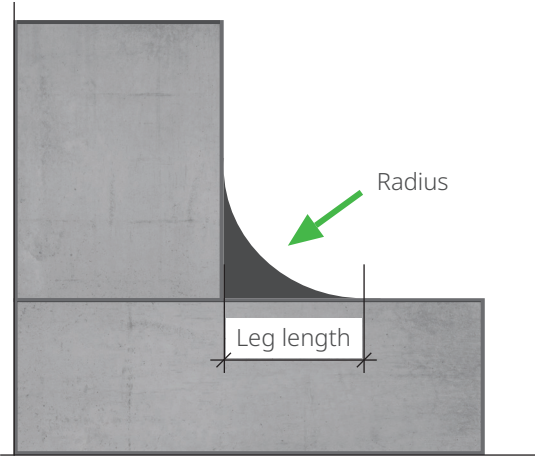
In case of surface roughness depth  $\leq 5$  mm or by negative side water incursion (i.e. surface irregularities, unevenness or small defects and break outs etc.) level the surface with KÖSTER NB 1 Grey with the addition of KÖSTER NB 1 Flex in the mixing water, applied with the KÖSTER Brush for Slurries.

### 6.6 Corners and fillets

All sharp corners and edges are to be rounded to a radius of approximately 4 - 6 cm at least. Fillet must be installed to reduce stress concentrations in the walls, and therefore in the coating. Fillets can be made from KÖSTER WP Mortar.



Alternatively, they can also be made with KÖSTER Repair Mortar or KÖSTER Repair Mortar Plus, whereby up to 20 % KÖSTER SB Bonding Emulsion is added to the water. Install fillets (leg length of approx. 4 - 6 cm) at least 12 hours before applying the KÖSTER NB Elastic Grey.



### 6.7 Priming the substrate

It is highly recommended to prime the surface with KÖSTER Polysil TG 500 before applying the KÖSTER NB Elastic Grey in case of a strongly salt contaminated and absorbent substrates. The consumption of KÖSTER Polysil TG 500 is approx. 100 - 130 g/m<sup>2</sup>. On strongly absorbent substrates a consumption of up to 250 g/m<sup>2</sup> is possible. The priming layer must be allowed to dry completely before applying the KÖSTER NB Elastic Grey.

In case where no salt contamination is present, applying a scratch coat of KÖSTER NB Elastic Grey can help to homogenize the surface absorbency and level the substrate up to a depth of 5 mm.

Prewetting with clean water can be also recommended for substrates free of salts.



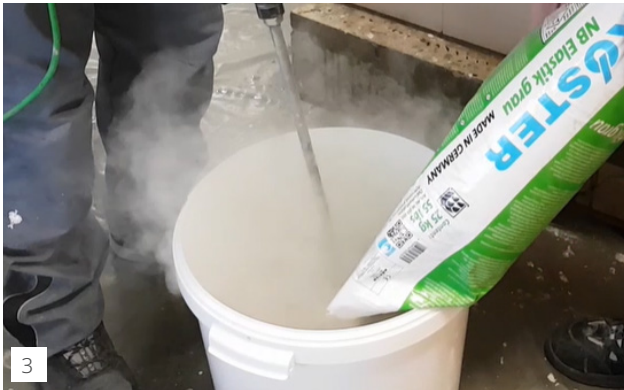


# 7 Application/Installation instructions

## 7.1 Mixing

The liquid component comes in two separate 4 kg bags. Pour the liquid component completely into a clean mixing container, which is large enough to accommodate the liquid and the powder component together. The powder component is slowly mixed into the liquid component in portions using an electrical mixer.

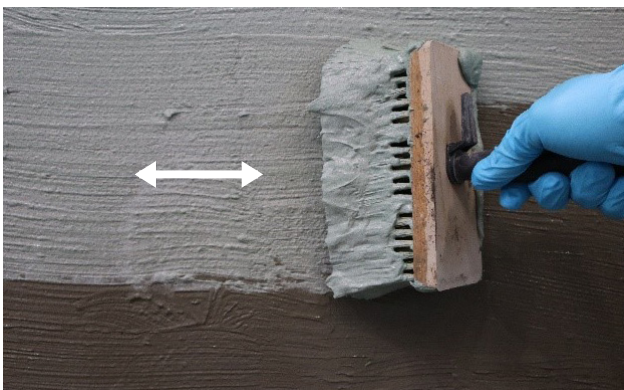
Mix both components intensively until a homogeneous, paste-like, lump-free consistency is reached. The minimum mixing time is 3 minutes. Use a clean mixing vessel for each batch or respectively clean the mixing vessel every time before mixing a new batch.



## 7.2. Brush application

KÖSTER NB Elastic Grey is applied in 2 coats by brush. The second coat is to be applied as soon as can be done so without damaging the first coat. The layers must be free of defects, even and in the recommended layer thickness. The actual dry layer thickness must not be less

than the recommended minimum and must not exceed it by more than 100 %. The area waterproofing of the wall must be overlapped at least 15 cm onto the front of the floor slab or the foundation. It is recommended to make the two coats perpendicular to each other.



### 7.3. Trowel application

KÖSTER NB Elastic Grey is applied in two coats by toothed or finishing trowel. Trowel application is also recommended for the application as a scratch coat. The size of the toothed trowel is commonly between 6 - 8 mm and is to be chosen according to the desired layer thickness. After distributing the material with the toothed trowel, the material can be smoothed with the finishing trowel for an easier installation of a reinforcement layer.

The second coat is to be applied the same way as soon as can be done so without damaging the first coat. The actual dry layer thickness must not be less than the recommended minimum and must not exceed it by more than 100 %. The area waterproofing of the wall must be overlapped at least 15 cm onto the front of the floor slab or the foundation.



### 7.4 Spray application

KÖSTER NB Elastic Grey is applied in 2 coats sprayed with the KÖSTER Peristaltic Pump. Alternatively, the b&m BMP6 or BMP7 screw pump can be used. Spray application saves time and gives a consistent final surface.



#### 7.4.1 Using KÖSTER Peristaltic Pump

KÖSTER NB Elastic Grey can be applied in 2 coats sprayed with the KÖSTER Peristaltic Pump. For improved processing or in hot conditions, up to 0.5 liters of water can be added to the material per container. The KÖSTER NB Elastic Grey can be spray applied with the KÖSTER Peristaltic Pump using the following settings:

Characteristics	Value
Max. hose length	10 m
Hose diameter	3/4"
Nozzle	8 mm
Speed	Adjusted according to air pressure
Voltage	230 V

#### 7.4.2 Using b&m BMP7 screw pump

KÖSTER NB Elastic Grey can be applied in 2 coats sprayed by the "BMP 7" screw pump" from b&m. For improved processing or in hot conditions, up to 0.5 liters of water can be added to the material per container. The KÖSTER NB Elastic Grey can be spray applied with the BMP7 Pump using the following setting:

Characteristics	Value
Max. hose length	10 m
Hose diameter	3/4"
Nozzle	6.5 mm
Gear	1
Speed	Adjusted according to air pressure
Voltage	230 V

### 7.5 KÖSTER Flex Fabric as a reinforcement

KÖSTER Flex Fabric is a highly flexible, finely woven plastic fabric reinforcing mesh with very high tear resistance for the reinforcement of the KÖSTER NB Elastic Grey, especially in areas prone to cracking, penetrations, external and internal edges as well as wall/floor connections. Apply the first layer of KÖSTER NB Elastic Grey by smoothing or toothed trowel.

Embedd KÖSTER Flex Fabric into the fresh first layer. The overlap between the KÖSTER Flex Fabric sheets must be min. 5 cm. Application of the second layer of KÖSTER NB Elastic Grey is possible as soon as can be done so without damaging the first coat to cover the surface of the KÖSTER Flex Fabric completely.



### Special preparations for external corners

Apply a first coat of the KÖSTER NB Elastic Grey. For the shown external corners it is recommended to make a special cutout piece from the fabric to be added at the corner. The cut should be made by a square of length 20 cm then make a diagonal cut from one of the edges. Now adhere the square cut.

Application of the second layer of KÖSTER NB Elastic Grey is possible as soon as can be done so without damaging the first coat to cover the surface of the KÖSTER Flex Fabric completely.

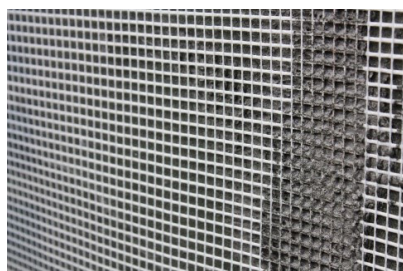


### 7.6 KÖSTER Glass Fiber Mesh as a reinforcement

KÖSTER Glass Fiber mesh is a glass silk fabric with extremely high tear resistance; and an excellent resistant to relocation and alkalis. It is recommended to use on surfaces where limited movement can be expected. To avoid cracks that might appear on the coating surface, it is recommended to add a reinforcement layer in between the KÖSTER NB Elastic Grey layers.

#### The application is as follows:

Apply the first layer by smoothing or toothed trowel. Embedd KÖSTER Glass Fiber Mesh into the fresh first layer. The overlap between the KÖSTER Glass Fiber Mesh sheets must be min. 5 cm. Application of the second layer of KÖSTER NB Elastic Grey is possible as soon as can be done so without damaging the second coat to cover the surface of the KÖSTER Glass Fiber Mesh completely.



## 7.7 Surface details

### 7.7.1 Connections to wall, doors, window frames

First Apply a first coat of KÖSTER NB Elastic Grey on the horizontal and the vertical surfaces covering an area of approx. 15 cm from the junction. While the material is still fresh, immediately embed a longitudinal strip of KÖSTER Flex Fabric of approx. 10 cm covering the corners and

the edges of the doors and windows. Then apply the second coat of KÖSTER NB Elastic Grey, so that it fully covers the KÖSTER Flex Fabric. Let the material cure to continue with the full area waterproofing.

### 7.7.2 Pipe penetrations

Pipe and cable penetrations can be waterproofed with KÖSTER KB-Flex 200. As an additional safeguard and to

hold the pipe/cable centered, the exposed material is covered with the KÖSTER KB-Fix 5.

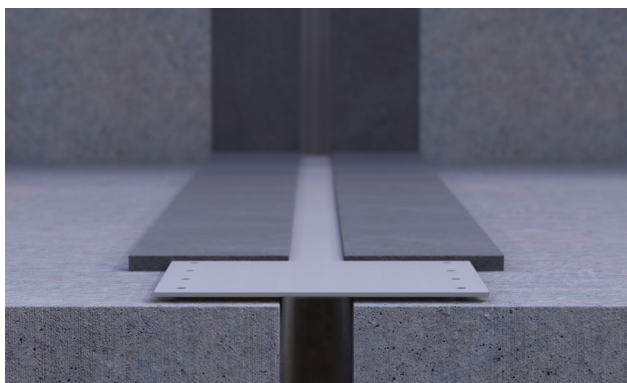


### 7.7.3 Moving joints

If dilation joints are present in the structure, these should be sealed with the KÖSTER Joint Tapes 20/30 before starting with the application of the KÖSTER NB Elastic Grey. KÖSTER KB-Pox Adhesive is applied to the prepared substrate on both sides of the joint so that both sides of the KÖSTER Joint Tape 20/30 are embedded into the adhesive at least 40-50 mm. The layer thickness of the KÖSTER KB-Pox Adhesive should be approx. 1-2 mm. The KÖSTER Joint Tape 20/30 is then immediately embedded into the fresh adhesive and pressed into the adhe-

sive using a hand roller or a similar suited tool. Make sure that the tape has complete contact to the adhesive. The KÖSTER Joint Tape 20/30 can be installed in the middle with a slightly concave form (omega profile) to allow for greater displacements of the joint.

24 hours after the installation of the KÖSTER Joint Tape 20/30, apply the KÖSTER NB Elastic Grey on top of both sides of the adhesive, the joint tape remains free in the middle.



## 8 General consumption guidelines

Approx. 3.6 - 4.5 kg/m<sup>2</sup>

The consumption rate refers to the total layer thickness.

To level the substrate up to 5 mm, a scratch coat of the KÖSTER NB Elastic Grey is recommended.

Case	MDT in mm	Consumption in kg/m <sup>2</sup>
Ground moisture	2.0	approx. 3.6
Non retained seepage water	2.0	approx. 3.6
Retained seepage water	2.5	approx. 4.5
Wall/floor waterproofing	2.0	approx. 3.6

MDT: Minimum dry film thickness

# 9 Quality control

## 9.1 Quality control for dry film thickness

The stepped side of the KÖSTER Wet Layer Thickness Gauge is pressed into the fresh waterproofing. After pulling out the gauge the layer thickness can be verified. The layer thickness is controlled with the KÖSTER Wet Layer Thickness Gauge. 20 measurements per construction site/per 100 m<sup>2</sup> must be taken.



The measuring points must be diagonally away from each other. In areas with penetrations more measurements should be taken. If two layers with an embedded mesh are applied, both layers must be controlled individually.



## 9.2 Quality control for final layer thickness

Recommended suited methods for quality control of the final layer, throughout drying and the thickness of the dry layer are checked in a destructive manner, e.g. by cutting into a reference sample. The substrate should corre-

spond to the object substrate. The reference sample should be stored under comparable climatic conditions. The dry layer thickness can be determined by a wedge cut.

# 10 General notes

## 10.1 Material storage

Store the material in a cool, frost free and dry environment. In originally sealed packages, the material can be stored for a minimum of 12 months.

## 10.2 Packaging



33 kg Package



Powder - 25 kg bag



Carton (2 x 4 kg foil bags)

# 11 Certifications

- **Test report 1202/793/20, MPA Braunschweig, 27.10.2020:**  
Liquid applied water impermeable products for external installations on walls and floors, beneath ceramic tiles
- **1202/127 / 21-1, DIN EN 1062-6: 2002:**  
Coating materials and coating systems for mineral substrates and concrete in outdoor areas - Part 6: Determination of the carbon dioxide diffusion current density, MPA Braunschweig, June 15, 2021
- **1202/127 / 21-1, DIN EN 1062-6: 2002:**  
Determination of water vapor permeability - shell method, MPA Braunschweig, June 15, 2021
- **MPA test report (1202/543/20c):**  
Pan from April 22, 2020 Crack-bridging at normal and low temperatures according to DIN EN 14891:2012-07.
- **ITB (Institute for Technical Building Materials) Warsaw:**  
Test for waterproofing components in contact with the ground, tanks, balconies and terraces, document number ITB-KOT-2019/0834 version 1 of June 28, 2021
- **ITB Test Report Nr. LZM00-03431/20/Z00NZM:**  
Mechanical, waterproofing, adhesion properties at high and low temperatures, and vapor transmission values

# 12 Appendix

<b>Technical Data</b>	<b>Product Name: KÖSTER NB Elastic Grey</b>
Material Class	Elastic Cementitious Coating
Temperature range for application	+ 5 °C to + 35 °C
Consumption approx.	3.6 – 4.5 kg / m <sup>2</sup>
Layers	2 / no primer (W)
Color	Light Grey
Solvent-Free	Yes
Can be plastered over	+
Mode of application	Trowel, Brushable , Sprayable
Suitable for negative side waterproofing	Sandwich-Waterproofing / over KÖSTER NB 1 Grey
Waiting time until backfilling	>48 hours
Simplicity of application	++
<b>Substrate</b>	
Masonry	+++
Cementitious plaster	+++
Concrete	+++
Polystyrene	+
Old Bitumen membranes	++
Moisture condition of surface	Dry or moist
Plaster	+++
Concrete or ceramic bricks	+++
Screeds	+++
Old ceramic substrates	+++
Gypsum	+
<b>Performance</b>	
Waterproofing against max. load condition	Pressurized Water
Time until rainproof	Approx. 8 hours
Chemical resistance	Good
Permeability to vapor diffusion	Medium
UV-resistance	Long term resistant
Abrasion resistance	+++
<b>Crack bridging</b>	+++
Embedding of a mesh	Yes

Lower+ Medium++ High+++

W wetting is sufficient (substrates should be moist). In case of highly absorbent substrates prime with KÖSTER Polysil TG 500

## 13 Legal disclaimer

This method statement reflects general cases with standard parameters. It is not suitable as a step-by-step guide for all and each waterproofing projects as the conditions on site at the moment of the application cannot be foreseen. It is solely the applicator's responsibility to

decide on the actual procedure considering the specific situation on the construction site. In any case, KÖSTER's Terms of business are valid and can be viewed under [www.koester.eu](http://www.koester.eu) 