




## KÖSTER Restoration Plaster Grey

Technical Data Sheet M 661 025

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- Off. Test Certificate, AMPA for stone and earth, Clausthal-Zellerfeld  
 - Test report according to DIN EN 998-1, MPA BAU Hannover

### Salt- and moisture resistant restoration plaster for inside and outside use

	<b>KÖSTER BAUCHEMIE AG</b> Dieselstraße 1-10, 26607 Aurich 13 M 661 EN 998-1:2010 <b>Restoration Plaster (R)</b> EN 998-1:2010 ZA.1
Compressive strength 28 d Capillary water uptake Tensile strength Dry density Depth of water penetration Coefficient of water vapor permeability Reaction to fire	CS II > 0.3 kg/m <sup>2</sup> after 24 h 0.08 N/mm <sup>2</sup> failure type A category 2: water tight 1.27 kg/dm <sup>3</sup> μ 10 A1

#### Substrate

Suitable substrates include concrete, masonry consisting of brick, natural stone, porous concrete block, perforated brick, mixed masonry, etc., sealing slurries such as KÖSTER NB 1 Grey, KÖSTER NB 2 White, or the KÖSTER KD-System. Loose particles and salt efflorescence should be removed mechanically prior to the beginning of the restoration. Prior to the application of KÖSTER Restoration Plaster Grey, the substrate is primed with KÖSTER Polysil TG 500 with a minimum consumption of 120 g / m<sup>2</sup>. Apply the KÖSTER Polysil TG 500 until the surface is saturated. In the case of strongly absorbent substrates the consumption can be up to 250 g / m<sup>2</sup>. Substrates previously treated with KÖSTER NB Waterproofing Slurry do not require a subsequent application of KÖSTER Polysil TG 500. Substrates containing gypsum are not suitable substrates and the gypsum must be removed.

#### Features

KÖSTER Restoration Plaster Grey is a salt and pressure resistant restoration plaster for the restoration of heavily moisture and salt burdened substrates. Due to its high porosity and hydrophobicity, KÖSTER Restoration Plaster Grey allows for the damage free drying and de-salting of masonry even in the case of high salt contents. It improves the insulative properties of the wall and therefore helps prevent the formation of condensate. KÖSTER Restoration Plaster Grey is free of light fillers and therefore requires no further surface treatment prior to the application of breathable paints or wallpaper which is open to vapor diffusion.

#### Technical Data

Density of fresh mortar	1.3 kg / l
Porosity of fresh mortar	> 30 Vol.-%
Compressive strength (7 days)	>5.5 N / mm <sup>2</sup>
Flexural tensile strength (28 d)	> 2.5 N / mm <sup>2</sup>
Porosity of cured plaster	> 40 Vol.-%
Setting time	approx. 3 hours
Working time (23 °C, 65 % RH)	approx. 60 minutes
Modulus of elasticity	> 6500 N / mm <sup>2</sup>
Minimum application temperature	+ 5 °C
Water requirement per 25 kg bag	2.8 - 3.3 kg

#### Fields of Application

KÖSTER Restoration Plaster Grey is suitable for the repair of moisture and salt damaged masonry, also after the post installation of a horizontal barrier with KÖSTER Crisin 76, KÖSTER Mautrol, KÖSTER Mautrol 2C, or KÖSTER Mautrol Flex 2C. It can be applied to reduce the formation of condensate after waterproofing rooms with high humidity using mineral sealing slurries such as the KÖSTER KD-System or KÖSTER NB 1 Grey.

KÖSTER Restoration Plaster Grey can also be used as a water repellent exterior plaster. In the case of exterior application we recommend the application of KÖSTER Repair Mortar on the base area up to 30 cm above ground level.

#### Application

##### KÖSTER Restoration Plaster Key

A plaster key is a thin slurry which is used as a bonding bridge between the substrate and the Restoration Plaster. The KÖSTER Restoration Plaster Key is cast onto the substrate with a brush or a trowel (Consumption approx. 4-6 kg / m<sup>2</sup>) so that the plaster key is no thicker than 5 mm and covers approximately 50% of the area. After hardening (approx. after 30 to 60 minutes) the Restoration Plaster can be applied. The key can also be made of KÖSTER Restoration Plaster Grey with the addition of max. 10% KÖSTER SB bonding emulsion added to the mixing water (Consumption approx. 3 kg / m<sup>2</sup>).

##### Preparing a Restoration Plaster Key

A plaster key is a thin slurry which is used as a bonding bridge between the substrate and the Restoration Plaster. To make a plaster key mix one bag of KÖSTER Restoration Plaster Grey with approximately 3.0 liters of water and 350 ml of KÖSTER SB Bonding Emulsion until a thin slurry is achieved. The exact amount of mixing water can be higher or lower depending on the temperature, humidity, and absorbency of the substrate. The plaster key has the proper consistency when it can be easily cast onto the surface but does not run off. The slurry is cast onto the substrate with a brush or a trowel so that the plaster key is no thicker than 5 mm and covers approximately 50% of the area. After 24 hours the Restoration Plaster can be applied. On rough surfaces or on walls where the joints have been scratched out no Restoration Plaster Key is required.

#### Mixing

One 25 kg bag is mixed with 2.8 l to 3.3 l of clean potable water. Put 2.5 l of water in a clean mixing vessel and add the powder in portions while continually mixing using a slow speed mechanical compulsory mixer (under 400 rpm). Add in portions as much of the remaining water as necessary to achieve the desired consistency and mix until the plaster has a homogeneous texture. Mixing time is 3 minutes after all powder has been added to the liquid.

Directly after priming the substrate with KÖSTER Polysil TG 500 the

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Restoration Plaster Key is applied (consumption: approx. 3 kg / m<sup>2</sup>) After 24 hours of waiting time the KÖSTER Restoration Plaster Grey is applied. The plaster is usually applied in two coats with a total layer thickness of approx. 2.5 cm. The layer thickness should be at least 2 cm and maximum 3 cm. For layers thicker than 2.5 cm, it is recommended to apply in two layers.

### Restoration against rising damp

Prior to the restoration of areas using the KÖSTER Restoration Plaster System, the waterproofing against rising damp (capillary wicking moisture in the wall) must be completed. For this refer to the following technical guidelines: KÖSTER Mautrol, KÖSTER Mautrol 2C, KÖSTER Mautrol Flex 2C, or KÖSTER Crisin 76. Immediately after closing the boreholes with KÖSTER KB-Fix 5, the salt treatment and substrate strengthening using KÖSTER Polysil TG 500 is carried out (minimum consumption is 120 g / m<sup>2</sup>, in the case of strongly absorbent substrates up to 250 g / m<sup>2</sup>). Directly after that, the Restoration Plaster Key is applied (Consumption: approx. 3 kg / m<sup>2</sup>) on top of which - after another 24 hours of waiting time - KÖSTER Restoration Plaster Grey is applied in one or two layers with a minimum thickness of 2.0 cm.

Reduction of condensate formation (subsequent measure when using the KÖSTER KD-System and KÖSTER NB 1 Grey)

The waterproofing against pressurized and actively flowing water is carried out using the KÖSTER KD System. Approx. 24 hours after finishing the waterproofing, the Restoration Plaster Key is applied. After another 24 hours, KÖSTER Restoration Plaster Grey can be applied on top of the Restoration Plaster Key.

After smoothing and curing, the surface of the restoration plaster can be covered with paints and wallpapers which are open to vapor diffusion without further pre-treatment.

When waterproofing against non-pressurized water and pressurized water without active leakages using KÖSTER NB 1 Grey and KÖSTER Polysil TG 500, the restoration plaster is thrown directly onto the last not yet cured layer of slurry without prior application of a plaster key.

### Aftertreatment

If aftertreatment is required or desired, for example due to very dry conditions, the plaster can be treated according to the general practice for mortars, such as covering with a thin PE sheet.

### Consumption

Approx. 12 kg/m<sup>2</sup> per cm layer thickness

On uneven surfaces additional consumption may have to be considered for levelling the surface.

### Cleaning

Clean tools immediately after use with water.

### Packaging

M 661 025 25 kg bag

### Storage

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

### Safety

Wear protective gloves and goggles when processing the material. Observe all governmental, state, and local safety regulations when processing the material.

### Other

Shrinkage / hairline cracks are not a defect as they are harmless and do not affect the system properties. KÖSTER Restoration Plasters contain quartz sand which, as natural raw materials, can contain traces of pyrite or other inclusions.

### Related products

KÖSTER KB-Fix 5	Prod. code C 515 015
KÖSTER Polysil TG 500	Prod. code M 111
KÖSTER Restoration Plaster Key	Prod. code M 154 025
KÖSTER Mautrol Liquid Sealant	Prod. code M 241
KÖSTER Mautrol 2C	Prod. code M 261
KÖSTER Mautrol Flex 2C	Prod. code M 262 020
KÖSTER Crisin Cream	Prod. code M 278
KÖSTER Crisin 76	Prod. code M 279
KÖSTER Fine Plaster	Prod. code M 655 025
KÖSTER Façade Cream	Prod. code P 200
KÖSTER Silicone Paint White	Prod. code P 260 010
KÖSTER KD System	Prod. code W 219
KÖSTER NB 1 Grey	Prod. code W 221 025
KÖSTER NB 2 White	Prod. code W 222 025
KÖSTER Repair Mortar	Prod. code W 530 025
KÖSTER Waterstop	Prod. code W 540 015
KÖSTER SB Bonding Emulsion	Prod. code W 710

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