



KÖSTER Mortar Tight

Waterproofing additive for renders, screeds and slurries

Features

With KÖSTER Mortar Tight, creating a waterproof render, screed or simple sealing slurry on the construction site using sand, cement, and water is possible. KÖSTER Mortar Tight is added to the mixing water.

KÖSTER Mortar Tight improves the density of the mortar structure. It makes the mortar water-repellent (hydrophobic) and promotes self-healing of micro-cracks through crystallization. As a result, the mortar becomes waterproof and the capillary absorption capacity is reduced.

KÖSTER Mortar Tight is free of chlorides and nitrates.

Technical Data

Colour	Milky, green
Density	approx. 1.02 g/cm ³
Processing temperature	+5 °C to +30 °C
Water pressure resistance of cementitious mixtures made with KÖSTER Mortar Tight	>2.5 bar*

*Cementitious mixtures made with KÖSTER Mortar Tight have shown water pressure resistances over 2.5 bar. This resistance is based on specific system structures consisting of a waterproofing slurry and at least 1 layer of waterproofing render. The water pressure resistance will vary according to the sand and cement types as well as the layers applied.

Fields of Application

KÖSTER Mortar Tight increases the impermeability of mortars and slurries against ground moisture, hydrostatic pressure, and driving rain. It is used for the production of waterproof renders, screeds and slurries for internal waterproofing, of underground structures such as basements or swimming pools.

It can also be used externally for the production of water-repellent renders and in various other areas where a waterproof mortar is required, e.g. for tanks, shafts, masonry, etc.

Always ensure that the intended application complies with the requirements of local building authorities. The performance of KÖSTER Mortar Tight is dependent on correct on-site mixing and application and only high-quality materials should be used. A self-made mortar with KÖSTER Mortar Tight cannot replace approved or certified sealing mortars or sealing slurries.

Substrate

For renders, screeds and slurries made with KÖSTER Mortar Tight, the surfaces and masonry to be treated must be thoroughly cleaned. Damaged joints must be excavated at least 2 cm deep. The substrate must be stable, rough, and free of substances that reduce adhesion. If necessary, roughen the surface.

External corners and edges must be chamfered. Internal corners and junctions should be profiled with a rounded fillet using KÖSTER Repair Mortar Plus. KÖSTER Joint Tape may also be used at internal angles,

prior to the application of the waterproof render and screed.

Prime the surface with KÖSTER Polysil TG 500 to ensure and maximize the chemical and mechanical resistance of the substrate, especially on salt-burdened substrates.

Application

KÖSTER Mortar Tight replaces a portion of the mixing water. The container should be well shaken before use. Ensure a thorough mixing of the mortar afterward.

For basement and tank waterproofing, it is recommended to first apply a layer of waterproofing slurry (approx. 2 mm) followed by a two-layer application of a waterproofing render prepared with KÖSTER Mortar Tight. The minimum layer thickness of the overall structure is approx. 22 mm. Alternatively, a traditional "3-layer render application" is acceptable, using varying sand/cement ratios in accordance with customary practice.

Where multiple layers of render/mortar are applied, the recommended waiting time between each layer is 12 - 48 hours. The first layer should be left roughened to increase the contact area. Alternatively, a thinned key coat of the mortar, made with KÖSTER Mortar Tight can be cast onto the previous layer with a brush or trowel to create a rough textured surface (approx. 50% coverage). After hardening of the key coat, the next layer can be applied.

For waterproof floor screeds, a layer of waterproofing slurry (approx. 2 mm) is applied to the concrete, followed by a one-layer screed (minimum thickness 30 mm) trowel application of a waterproof mortar made with KÖSTER Mortar Tight. The minimum total thickness of the system is 32 mm.

For basement waterproofing, the waterproof render should terminate at least 30 cm above external ground level. When waterproofing floor surfaces, the waterproof mortar should be extended over the previously installed fillet (with a leg length of at least 4 cm) and continue up the wall at least 20 cm.

Consumption

For waterproofing basements against pressurized water 1 kg per 10 l water.

By volume (approximate values):

	Cement (L)	Sand (L)	Water (L)	KÖSTER Mortar Tight (L)
Waterproofing mortar	1	1.5	0.4	0.04
Waterproofing slurry	1	0.45	0.4	0.04
Floor Screed	1	3	0.45	0.04

The given values in the table are reference values using kiln-dry sand and specific grading curves. The use of different aggregate compositions will require adjustment of the water requirements. If the

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sand is damp, reduce the amount of water accordingly.

By weight (assumed bulk density: cement 1.1 kg/l; sand 1.45 kg/l):

	Cement	Sand	Water	KÖSTER Mortar Tight
Waterproofing mortar	25 kg	50 kg	10 kg	1.0 kg
Waterproofing slurry	25 kg	15 kg*	10 kg	1.0 kg
Floor Screed	25 kg	100 kg	11.2 kg	1.1 kg

*optimal grading curves:

65% of grading curve 0.2 - 0.8 mm

35% of grading curve 0.063 - 0.355 mm

These mixtures may vary depending on the desired consistency, type, and condition of the cement and mortar sand. Varying sand / cement ratios can also be used for a traditional 3-layer render application. Preliminary tests should be conducted. The water-to-cement ratio (w/c value) should not exceed 0.5. Higher w/c values reduce the strength and tightness of the mortar.

The following sieve sizes are recommended for the mortars:

Slurry: grain size 0.063 - 0.355 mm and 0.2 - 0.8 mm

Render: grain size 0.2 to 2.0 mm

Screed: grain mixtures 0.2 to 4.0 mm (e. g. screed sand)

KÖSTER Mortar Tight's effectiveness depends on the sand and cement quality used in the mix. Impurities in the sand, such as lignite, hydrated lime, and pyrites, can weaken the mortar and cause surface defects.

Cleaning

Clean tools immediately after use with water.

Packaging

C 788 010 10 kg jerrycan

Storage

Store cool and frost-free. In original sealed containers it can be stored for a minimum of 18 months.

Safety

Wear protective gloves and goggles. Avoid eye contact. Please refer to the safety data sheet for further information.

Information

Observe all local, state, and federal safety regulations when processing the material.

Other

- KÖSTER Mortar Tight creates a water-repellent (hydrophobic) surface. The suitability of subsequent coatings must be checked in advance. If a hydrophobic surface is not desired for subsequent coatings, a further layer of cement slurry or cement mortar without adding KÖSTER Mortar Tight is applied as a bonding bridge after the sealing mortar or sealing slurry is installed.
- Avoid contact with gypsum to prevent ettringite formation when working with cementitious products.

Area coverage example:

With a 10 kg jerrycan of KÖSTER Mortar Tight and the specified mixing ratios, it is possible to coat the following areas:

	Sand+cement (kg)	Raw mortar density (kg/m³)	Layer thickness (mm)	Area (m²)
Slurry	350	approx. 1900	1 mm	approx. 240
Mortar	750	approx. 2150	20 mm	approx. 20
Screed	1250	approx. 2150	30 mm	approx. 20

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