

## 3-component high chemically resistant mortar on polymer- and silicate-base

### Features

KÖSTER PSM is a special mineral mortar on polymer- and silicate-base with high resistance to acids. The fully cured mortar possesses a high compressive strength and is abrasion resistant.

### Technical data

Basis	Powder comp.	Cement free powder mix made of sand and anorganic additives
	Polymer comp.	Polyurethane pre-polymer
	Silicate comp.	Water-based silicate solution
Max. grain size		0.4 mm
pH-value silicate comp.		approx. 11
Field of application		pH 0 bis 8
Pot life at 15 °C		20 min
Density (mixture)		1.9 g / cm <sup>3</sup>
Compressive strength (24 h)		> 5 N / mm <sup>2</sup>
Compressive strength (7 days)		> 15 N / mm <sup>2</sup>
Flexural tensile strength (7 days)		> 5 N / mm <sup>2</sup>
Long term resistant to	Damaging salts, oils, fats, acids (up to pH 0)	

### Field of application

KÖSTER PSM is intended for protecting horizontal and vertical areas on all mineral substrates such as e. g. concrete, masonry, cementitious plaster, in moist and wet areas, in areas which are exposed to high chemical stresses due to acids and for heavy duty corrosion protection.

### Substrate

The mineral substrate must be dry, level, clean and sound and solid. Substances which inhibit the adhesion such as e. g. bitumen, paint, oil, dust, cement slurry etc. must be removed mechanically. Damaged concrete must be milled down to the sound and solid concrete substrate. Minimum adhesive tensile strength to the substrate must be 1.5 N/mm<sup>2</sup>. Substrates which have been damaged by acids must be milled until the undamaged substance of the substrate is reached.

### Mixing

The resin component and the silicate component are mixed in a clean bucket (which has sufficient volume for the total packaging

amount) using a slow rotating mixing device until the mixture has a homogeneous consistency. A homogeneous consistency is reached when the liquid becomes caramel-coloured. This should be the case after approx. 20 seconds of mixing. The pot life starts when the two liquids have been mixed together. Now swiftly mix the powder component into the prepared resin/silicate mixture while continually operating the mixing device. Attention: Maximum mixing time: 3 minutes. Longer mixing times will reduce the pot life.

### Application

All waterproofing and protective coatings have to be applied in at least two coats. Preparative measures such as primers, key coats etc. do neither contribute to the effective coating thickness nor do they count as one of these coats.

First coat: Apply the KÖSTER PSM mixture as a first coat to the substrate using a suitable toothed trowel or spatula (6 mm) to obtain the desired average thickness (ridges should be approx 3 mm). The first coat is applied so that a horizontal comb pattern is produced. It is left to cure for a minimum of 1 hour to assure sufficient hardening. Quality control: use a stop watch to ensure that stale or expired material is discarded and not applied. Never add water to stale material. Use a thickness gauge in suitable intervals to ensure that the correct material thickness has been reached.

The second coat is applied after the first coat has cured to a hard incompressible comb structure.

Second coat: Apply the KÖSTER PSM mixture on the cured first coat and smoothen. The ridges of the first coat will then be an indication of the min. thickness applied. The total coating thickness has to be min. 3 mm. The surface finish of the second coat must be smooth and free of pinholes and or gaps. The max. waiting time between application of the first and the second coat should not exceed 24 hours. Optical repairs and touch up should be made within 24 hours. Protect the fresh PSM from moisture and / or chemical exposure for at least 24 hours. After a curing time of 72 hours, brush or spray on KÖSTER Polysil BG 2S+ (Consumption: 200 g / m<sup>2</sup>). After another 7 days of curing time, the coating can be exposed to stresses.

For the installation of fillets (e. g. when coating tanks), KÖSTER Repair Mortar Plus must be used. The surface of the applied coating made of KÖSTER PSM must only be smoothed by pulling a plastering trowel over the surface, not by rubbing in a circular

motion with a float. KÖSTER PSM is cement free; do not add water under any circumstance. Cured material can not be stirred up again.

If KÖSTER PSM is applied using a suited spraying device such as the KÖSTER Variojet, ambient temperature should be below 25 °C.

#### **Cleaning of tools**

Clean tools immediately after use with water.

#### **Consumption**

Approx. 1.9 kg / m<sup>2</sup> per mm layer thickness

#### **Storage**

Store the material dry; in originally sealed packages, it can be stored for approx. 6 month.

#### **Packaging**

Powder component	24 kg bag
Polymer component	1.25 kg cannister
Silicate component	5.5 kg cannister

#### **Safety precautions**

Silicates act acidic when coming in contact with skin, eyes or mucous membranes. The resin component contains iso-cyanites and is hazardous to health. Wear tightly closed protective goggles, solvent-resistant and solvent-proof gloves as well as long sleeved protective work cloth.

#### **Technical guidelines cited**

KÖSTER Polysil BG 2S+	Art.-No.	4.516
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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.