KÖSTER
Waterproofing Systems

KÖSTER PSM

Technical Data Sheet C 280 030

Issued: 2023-08-22

High chemically resistant special mortar in the area of pH 0-8

CE	KÖSTER BAUCHEMIE AG Dieselstraße 1-10, 26607 Aurich **13** **CT 280** **EN 13813:2002** **KÖSTER PSM** **Synthetic resin for internal uses**
Reaction to fire	Efl a)
Release of corrosive substances	SR
Water permeability	NPD
Wear resistance	≤ AR 0.5
Bond strength	≥ B 2.0
Impact resistance	Class 2
Sound insulation	NPD
Sound absorption	NPD
Thermal resistance	NPD
Chemical resistance	NPD
Dangerous substances	NPD

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

BasisPowder 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 / cm³
Compressive strength (24 h)	> 5 N / mm²
Compressive strength (7 days)	> 15 N / mm²
Flexural tensile strength (7 days)	> 5 N / mm²
Long term resistant to	Damaging salts, oils, fats, acids (up to pH 0)

Fields of Application

KÖSTER PSM is intended for protecting horizontal and vertical areas on all mineral substrates such as e. g. concrete, masonry, cementitious plaster, and in areas which are exposed to high chemical stresses due to acids and for heavy duty corrosion protection. KÖSTER PSM 2S+ can be applied over the KÖSTER PSM to increase the chemical resistance.

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 ground or milled down to the sound and solid concrete substrate. Minimum adhesive tensile strength to the substrate must be 1.5 N/mm². Substrates which have been damaged by acids must be milled until the undamaged substance of the substrate is reached. Defects and cracks are repaired beforehand and fillets installed with KÖSTER Repair Mortar Plus with a leg length of 4-6 cm. Edges are to be broken.

Application

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-colored. This should be the case after approx. 20 seconds of mixing. The pot life starts when the two liquids have been mixed together. Now 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.

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.

The total consumption on a flat surface is 5 kg/m² applied in two layers. Excessive consumption may lead to cracking in the material.

Apply the individual coats as follows:

First coat: Apply approx. 2.5 kg/m² with an appropriately sized toothed trowel. Do not completely smooth the surface as to leave a rough surface for increased surface contact for the application of the second layer.

The second coat is applied after the first coat has cured to a point where it is not damaged by the application of the second layer, and within 24 hours of the application of the first layer.

Second coat: Apply the KÖSTER PSM over the first coat and smoothen. The total coating thickness should be between 2 mm and 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.

When applying, especially the second layer the ambient temperature and the temperature of the first layer of PSM must be +3 °C above the dew point for at least 24 hours and the relative humidity should not be over 75%.

Each fresh layer should not exceed 2 mm thickness, and the final suggested layer thickness 3 mm.

Protect the fresh PSM from moisture and / or chemical exposure for at least 24 hours. After approx. 4 hours brush or spray on KÖSTER PSM 2S+ (Consumption: 50 g/m²). After another 7 days of curing time, the coating can be exposed to stresses.

Temperatures must be at least +3 °C above the dew point during processing and curing, especially when applying the second layer. The relative humidity must not exceed 72% during processing.

Quality control: use a stop watch to ensure that the material is installed within it's pot-life. Do not apply material past it's pot-life. Never add water to old material. Use a thickness gauge in suitable intervals to ensure that the correct material thickness has been applied.

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

KÖSTER BAUCHEMIE AG • Dieselstraße 1-10 • D-26607 Aurich • Tel. 04941/9709-0 • Fax -40 • info@koester.eu • www.koester.eu

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 re-mixed.

Consumption
Approx. 1.9 kg / m² per mm layer thickness

Cleaning
Clean tools immediately after use with KÖSTER PUR Cleaner.

Packaging

C 280 030	30.75 kg combipackage: powder component: 24 kg bag, silicate component: 5.5 kg jerrycan, polymer component: 1.25 kg jerrycan

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

Safety
Silicates act acidic when coming in contact with skin, eyes or mucous membranes. Contains diisocyanate. When working with the material, work clothing that covers arms and legs or a protective suit must be worn. When working in confined spaces or in the "overhead area" hoods or covers must be worn. Wear suitable protective gloves (e.g., nitrile gloves) and protective goggles. Observe all local, state, and federal safety laws when mixing and applying the material.

Related products

KÖSTER PSM 2S+	Prod. code C 380 010
KÖSTER Repair Mortar NC	Prod. code C 535 025
KÖSTER Repair Mortar R4	Prod. code C 536
KÖSTER PUR Cleaner	Prod. code IN 900
KÖSTER Repair Mortar	Prod. code W 530 025
KÖSTER Repair Mortar Plus	Prod. code W 532 025
KÖSTER WP Mortar	Prod. code W 534 025

KÖSTER BAUCHEMIE AG • Dieselstraße 1-10 • D-26607 Aurich • Tel. 04941/9709-0 • Fax -40 • info@koester.eu • www.koester.eu