KÖSTER
Waterproofing Systems

KÖSTER SL Protect

Technical Data Sheet SL 286 025

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Protective self-leveling floor with high chemical resistance

SL - Self leveling underlayments

Features
KÖSTER SL Protect is a mineral based self-leveling underlayment with high resistance to chemical and mechanical stresses. It is an early loadable, directly useable leveling layer over uneven or coarse concrete and cementitious screeds. Due to its high chemical resistance it is used to protect against light and medium corrosion and serves as a slowly reacting sacrificial layer in areas of high chemical stress. KÖSTER SL Protect is further used for fast repairs and protection in agricultural, industrial, workshop, production facilities, commercial and private use buildings.

Technical Data

Application temperature	+ 5 °C - + 30 °C
Pot life (+ 20 °C)	approx. 30 min.
Resistant to foot traffic	after approx. 3 hours*
Compressive strength (7 days)	> 25 N/mm²
Compressive strength (28 days)	> 45 N/mm²
Bending tensile strength (7 days)	> 5 N/mm²
Bending tensile strength (28 days)	> 10 N/mm²
Shrinkage	less 0.5 mm / m
Modulus of elasticity	> 15000 N/mm²
Mixed density	approx. 1.9 g/cm³
Layer thickness	5 - 30 mm
	can be feathered out to 2 mm
	*depending on temperature

Fields of Application
KÖSTER SL Protect is suitable for all interior and exterior floor leveling applications, especially those in industrial and agricultural areas where high chemical and mechanical resistance is required.

Substrate
The substrate has to be sound and solid as well as free of bond inhibiting agents such as grease and oil. Remove all bond breaking substances such as laitance, loose particles, dust, formwork release oil, etc. The substrate can be prepared according to need by shotblasting, grinding, or sweeping and vacuuming. Do not acid etch substrates or clean the substrate with chemicals. Joints in the substrate have to be re-created in each successive layer; do not bridge expansion joints with KÖSTER SL Protect. Concrete and screed substrates are primed with KÖSTER SL Primer to reduce absorption before application. Non absorbent substrates are primed with KÖSTER VAP I 06 Primer. Do not apply over adhesive residue. The minimum tensile strength of the substrate for wheel trafficked areas is 1.5 N/mm².

Application
Mix each 25 kg bag of KÖSTER SL Protect with 3.0 liters of potable water. The water is placed in a clean mixing vessel and the powder added while constantly mixing. Use a double paddle mixer and mix intensively for no less than 3 minutes until a flowable, lump free consistency is reached. We recommend to always mix 2 bags with a total of 6.0 l of water at once. When feathering out the material in very thin layers a maximum of 0.5 liters of water may be added per bag.

Distribute the material in the desired layer thickness directly after mixing. Mix and distribute the material in a constant work flow to avoid visible work edges. The material is self-levelling when working “fresh in fresh”. While working larger areas use a KÖSTER Gauging Rake to distribute the material. Rolling the surface with a KÖSTER Spiked Roller immediately after distribution creates a very smooth surface through better de-airing. Install the KÖSTER SL Protect within 20 minutes. Do not delay successive pours by more than 10 minutes to avoid visible work edges.

The surface quality of the underlayment depends on workmanship, layer thickness, and curing parameters so that variations from a sample surface may occur. Moisture sensitive floor coverings and sealers may not be applied before the material has fully cured. Install KÖSTER SL Protect in one layer and not in multiple lifts.

Depending on the temperature it may take between 24 and 72 hours for the material to attain a residual moisture content of less than 3 M%.

Required tools
Drill with basket mixer, BEBA mixer, compulsory mixer, mortar pump with compulsory mixer, transport and pouring tools, buckets, gauging rake, spiked roller.

Aftertreatment
Curing can be aided by covering the hardened material with polyethylene sheets. This reduces surface shrinkage tension especially when the material has been applied in thick layers.

Consumption
Approx. 1.9 kg / m² / mm layer thickness

Cleaning
Clean tools immediately after use with water.

Packaging

SL 286 025	25 kg bag

Storage
Store the material in a dry environment at temperatures between +10 °C and +30 °C. In originally sealed packages, the material can be stored for a minimum of 6 months.

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

Eye contact – Flush immediately with water and consult physician. Do not rub eyes.

Skin contact – Wash off immediately with soap and water.

Other
Only apply at temperatures between + 5 °C and + 30 °C. Low temperatures will increase the pot life and high temperatures will

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decrease the pot life. Protect KÖSTER SL products from premature drying through sun and drafting air currents. When installing in wet areas apply a protective coating or system.

The surface appearance of the underlayment is dependent on the workmanship, layer thickness, and curing parameters. There may be differences in appearance to test areas. Do not install moisture sensitive floorings and coatings before the underlayment has completely cured to a residual moisture content of less than 3 M %, depending on layer thickness and environmental condtitions between 24 and 72 hours. Sand the surface thoroughly before applying reactive resins.

Related products

Quartz Sand 0.7 - 1.2 mm	Prod. code CT 485
Quartz Sand 1.0 - 2.0 mm	Prod. code CT 486
KÖSTER Spiked Roller	Prod. code CT 914 001
KÖSTER Gauging rake	Prod. code CT 915 001
KÖSTER Polysil TG 500	Prod. code M 111
KÖSTER SL Primer	Prod. code SL 189 005
KÖSTER SL Flow Test Board	Prod. code SL 900 001
KÖSTER Rubber Gloves	Prod. code X 920 001
KÖSTER Double Paddle Mixer	Prod. code X 992 001

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