



KÖSTER SL Protect

Protective self-leveling floor with high chemical resistance

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. KÖSTER SL Protect is self-leveling from 5 mm, but can be feathered out to 2 mm with suitable tools.

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/mm ²
Compressive strength (28 days)	> 45 N/mm ²
Bending tensile strength (7 days)	> 5 N/mm ²
Bending tensile strength (28 days)	> 10 N/mm ²
Shrinkage	less 0.5 mm / m
Modulus of elasticity	> 15000 N/mm ²
Mixed density	approx. 1.9 g/cm ³
Max. aggregate size	approx. 1.5 mm
Layer thickness (self-leveling)	5 - 30 mm
Not self-leveling	2 - 5 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. Fill voids larger than 30 mm with KÖSTER Repair Mortar NC or KÖSTER Repair Mortar R4 before starting work. 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 below 5 mm a maximum of 0.3 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.

In areas around columns or other rising components, an edge insulation strip must be installed in the case of floating structures

For installations of 300 m² or more, we recommend the use of a discontinuous batch mixing pump such as >stockbig No.3, Putzmeister S5 EVTm, or Euromair Compact Pro 35 / ideal.

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.

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.

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 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 conditions between 24 and 72 hours. Sand the surface thoroughly before applying reactive resins.

Related products

KÖSTER Repair Mortar NC	Prod. code C 535 025
KÖSTER Repair Mortar R4	Prod. code C 536
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

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