KÖSTER UC 100

Technical Data Sheet CT 251 026

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Self-leveling, abrasion resistant, chemically resistant polyurethane cement floor covering

Features

KÖSTER UC 100 is a self-leveling, highly abrasion resistant floor covering which is also resistant to aggressive chemicals. It is resistant to impacts and temperature shock. The three component product is solvent free. KÖSTER UC 100 is a pigmented floor covering and is applied in layers between 3 and 9 mm.
The following characteristics distinguish KÖSTER UC 100:

- Superior adhesion
- Superior impact resistance
- Superior chemical resistance
- Easy maintenance
- Good thermal shock resistance
- Low temperature curable
- Can be applied to 7 day old concrete
- Generally no primer necessary
- One coat system

Technical Data

Color	Pebble grey, other colors available
	4.9 kg liquid component (A)
	4.2 kg resin component (B)
	17 kg powder component (C)
	KÖSTER UC Pigment Paste (0.45 kg)
Pot life at + 23 °C	approx. 15 min.
Installation temperature	between + 5 °C and + 25 °C
Difference to dew point	min. + 3 °C
Density (+ 20 °C)	1.53 g / cm^3
Application thickness	3 - 9 mm
Tensile strength (7 days)	> 2 N / mm^2 (C25/30)

Fields of Application

KÖSTER UC 100 is a decorative floor covering with high abrasion resistance and can be applied on cement based floors, (minimum tensile strength of the substrate 1.5 N / mm^2). KÖSTER UC 100 is suitable for the food industry, bakeries, pharmaceutical industry, cleaning and filling areas, multi-function halls, production facilities, garages, driving lanes in industry and storage facilities, sanitary facilities, agricultural structures such as silos and feed alleys, and many other areas. Slip resistance can be increased by broadcasting with kiln dried silica sand.

Substrate

The substrate must be dry, free of loose particles, as well as free of oil and grease. Contaminated, machine-troweled, and unstable surfaces must be removed down to a coatable layer. The surface is prepared by shotblasting. A surface roughness comparable to an ICRI SSP 3 - 4 is suggested. Dust must be completely removed. Cracks and surface defects greater than 5 mm are opened and cleaned down to a solid layer and are filled with KÖSTER LF-BM mixed with kiln dried silica sand. Alternatively surface cracks filled and absorbent substrates can be primed with KÖSTER UC 300. Substrates with high vapor drive should be treated with KÖSTER VAP I 2000. It is the responsibility of the owner or their representatives to examine the substrate for contaminants and moisture content. Please contact the technical department for additional details and guidelines concerning testing.

Application

Planning the installation

Proper planning is essential to achieve a uniform appearance. Join lines will show in the finished floor. Lay out the installation in sections so that the full width of the area can be coated in 15 minutes or less in order to avoid placement lines. Work must be planned so that each successive batch can be worked into the previous.

Edge details

If the coating is to end in an open area, such as before the begin of a carpeted area, at an expansion joint, on at a doorway, a 3 mm wide and 3 mm deep groove is cut into the floor so that the KÖSTER UC 100 can mechanically key into the surface.

Treating cracks and defects in the substrate

Smaller, static cracks up to 0.5 mm wide can be bridged with KÖSTER UC 100. Defects larger than 5 mm are to be filled with KÖSTER LF-BM mixed with kiln dried sand. Larger cracks should be opened and filled with KÖSTER LF-BM filled with kiln dried sand. Elevations should be ground flat before installing KÖSTER UC 100.

The surface and room temperature must be at least + 3 °C above the dew point during and for 12 hours after application.

Mixing

KÖSTER UC 100 consists of three components. All components must be brought to a temperature between + 15 °C and + 25 °C before application. Always mix complete containers, and empty the individual containers completely. Never mix partial containers. Choose a suitable area for mixing, and cover it with a tarp or PE foil to protect it from splashed material. Do not mix and apply in direct sunlight or at temperatures greater than + 25 °C. Plan for multiple clean mixing vessels and rotate their use as to reduce waiting times between mixing. Before mixing make sure all preparation work has been done and all required machines and tools are ready. Once installation has commenced it may not be interrupted. The mixing cycle is to be timed with a stopwatch. The A component is mixed into the B component and mixed for approx. 30 seconds with a resin stirrer, for example the KÖSTER Resin Stirrer, with approx. 300 rpm. When coloring the the material, the KÖSTER UC Pigment Paste is then added and mixed in. Only after mixing the A and B component is the powder mixed in using

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a double paddle mixer such as the KÖSTER Double Paddle Mixer. Slowly add the powder and mix for 2 minutes. Make sure material sticking to the side of the mixing vessel is completely mixed in. Re-pot the material and mix for a further minute. Properly mixed material is easily spreadable and achieves a homogenous, smooth surface.

Incomplete mixing shows in a reduced spreadability and can lead to blistering of the surface. Poorly mixed material must be immediately removed from the surface and discarded.

Remove material from the mixer by letting it spin free at a high rpm and by wiping clean. Clean the mixing vessels regularly so as not to have old material mixed in with the new. This could lead to irregular curing and blister formation.

Install mixed material without delay.

Application method
Pour all mixed material onto the floor and distribute it with a toothed spreader or gauging rake. Check the toothed spreader each 100 m^2 for signs of wear. Always have a second spreader at hand to avoid work flow interruptions. Use a trowel to distribute material along edges, floor drains, and installations with constant pressure while holding the trowel at a slight angle. Be sure to quickly work fresh material into previously installed material to avoid visible work edges. Clean the toothed spreader with solvent if old material builds up on it. Use a new spreader once the teeth are worn down. Ensure tools are dry before they come into contact with KÖSTER UC 100. Check the layer thickness regularly during application to insure that your tools and application methods are delivering the desired layer thickness. Immediately after spreading KÖSTER UC 100, roll the material with a spiked roller. Do not go back and roll again once you have left an area. Too much rolling may leave the surface uneven. None or too little rolling will also leave the surface uneven.

When broadcasting with silica sand this must be done immediately after the material has been spread. Use only kiln-dried silica sand. If other broadcast material is desired please contact the KÖSTER Technical Department. Remove excess broadcast material by sweeping and vacuuming with an industrial vacuum after the material has cured.

The cleaned, broadcast surface is sealed with KÖSTER UC 300. KÖSTER UC 300 is spread with a rubber squeegee and crossrolled with a short-napped roller. Refer to the respective KÖSTER Technical Data Sheets for the installation instructions of each product.

NOTE
Keep moisture from coming into contact with KÖSTER UC 100 during installation and curing. Water may alter the surface appearance.

Allow the material to fully cure. A minimum of 8 hours curing time at + 23 °C, 24 hours at + 10 °C is required before allowing foot traffic. Longer curing time is required before fully loading the floor.

The product is best installed at temperatures between + 15 °C and + 25 °C. Exposure to UV light will change the hue of KÖSTER UC 100. Sunlight and metal halide lamps will cause yellowing without affecting performance. Slight batch-to-batch color variations may occur. When ordering to match a previous color, inquire if the same batch number or quality control number is still available. KÖSTER UC 100 can be slippery when oily. Do not apply to un-reinforced sand cement screeds, asphalt or bitumen substrates, glazed tile, nonporous brick and tile, magnetite, copper, aluminium,. Polyesters, or elastomeric membranes.

The maximum grain size of the kiln dried silica sand should not exceed 1/3 of the layer thickness.

Liquid polymers react to changes in temperature by changing their viscosity, hardening times, and hue. The Technical Data Sheets must be adhered to. Due to the dew point coating work is generally done by constant or falling temperatures. Low temperatures will slow the reaction rate and high temperatures will speed the hardening. Protect the coating from moisture until final cure.

Consumption
1.53 kg / mm layer thickness / m^2

Cleaning
Clean tools immediately after use with KÖSTER Universal Cleaner. Cured material can only be mechanically removed.

Packaging

CT 251 026	26.1 kg combipackage: Component A 4.9 kg; Component B 4.2 kg; Component C 17 kg

Storage
Store the material in a dry environment between + 5 °C and + 25 °C. In originally sealed containers it can be stored a minimum of 6 months.

Safety
Wear gloves and goggles when processing the material. Observe all governmental, state, and local safety guidelines when installing the material.

Related products

KÖSTER Repair Mortar NC	Prod. code C 535 025
KÖSTER LF-BM	Prod. code CT 160
KÖSTER VAP I 2000	Prod. code CT 230
KÖSTER VAP I 2000 FS	Prod. code CT 233
KÖSTER VAP I 2000 UFS	Prod. code CT 234
KÖSTER UC 300	Prod. code CT 253 010
KÖSTER SL Protect	Prod. code SL 286 025
KÖSTER Universal Cleaner	Prod. code X 910 010

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