KÖSTER
Waterproofing Systems

KÖSTER CT 121

Technical Data Sheet CT 121

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- Test Report from the Institute of Construction materials, building and fire protection, MPA Braunschweig, 1200/535/15, vom 22.05.2017
- Material testing and development GmbH u. Co.KG, Test Certificate Nr. 131044, SRT/17, 28.04.2017, "Method for testing the traction of surfaces: Pendulum test"
- Material testing and development GmbH u. Co.KG, Test Certificate Nr. 128117 - S/17, "Individual test of the slip resistant properties according to DIN 51130".
- Test Report from the Institute of Construction materials, building and fire protection MPA Braunschweig, Classification of the fire properties according to EN 13501-1:2010-1, K-2300/134/17-MPA BS, 24. Februar 2017
- Compatability on wet concrete (EN 13578:2003), IGH Croatia, Test Report No. 72530-PS/059/18

Moisture tolerant, solvent-free epoxy primer, universal binder, and primer resin for the trafficable coating OS-8 System

CE	**KÖSTER BAUCHEMIE AG Dieselstraße 1-10, 26607 Aurich 16 CT 121 EN 13813:2002 KÖSTER CT 121 Synthetic resin for internal uses**
Reaction to Fire	E_{fl}
Release of Corrosive Substances	SR
Water vapour permeability	Class III
Abrasion Resistance	≤ AR 0,5
Tensile strength	≥ B 2,0
Resistance to Impact	IR 4
Sound Absorption	NPD
Schalladsorption	NPD
Thermal Insulation	NPD
Chemical Resistance	NPD
Dangerous Substances	SR

CE 0761	**KÖSTER BAUCHEMIE AG Dieselstraße 1-10, 26607 Aurich 17 CT 121 EN 1504-2:2004 KÖSTER CT 121 Protection against penetration of consituents (1.3) Surface protection product - Coating Physical Resistance (5.1) Resistanc to chemicals (6.1)**
Linear Shrinkage	≤ 0,3%
Compessive strength	Class I ≥ 35 MPa
CO_2 permeability	S_d ≥ 50 m
Water vapour permeability	Class III (S_d ≥ 50 m)
Capillarywater absorption and permeability	w ^{0,5}
Adhesive tensile strength and temperature change compatability	a) no cracks, no blisters, no debonding b) ≥ 2,0 (1,59)
Resistance to strong chemical attack	Buchholz ≤ 50%
Impact resistance	No cracks, no debonding
Abrasion resistance	< 3000 mg
Reaction to fire	Class E_{fl}

Features

KÖSTER CT 121 is a universally applicable, moisture tolerant, solvent-free epoxy resin with high adhesion properties and can be used e.g. prior to the application of KÖSTER CT 221 and for the production of concrete protection systems or trafficable surfaces according to the OS-8 system.

KÖSTER CT 121 develops excellent adhesion on mineral substrates and epoxy resins.

Can be used with kiln-dried quartz sand, e.g. as a primer resin, as a scratch coat, as a leveling mortar or as a stand-alone epoxy resin screed.

For substrates that are permanently exposed to moisture and are to be finished with vapor-proof floors, we recommend one of the KÖSTER VAP 2000 products.

When used as a binder, KÖSTER CT 121 with kiln-dried quartz sand can also be used to produce a drainage mortar.

Technical Data

Mixing ratio	2:1 by weight
Pot life	approx. 60 min.
Working temperature	min. + 15 °C - max + 30 °C
Material temp. during application	min. + 15 °C - max. + 25 °C
Substrate temperature	min. + 8 °C
Density	approx. 1.0 kg/l
Viscosity of mixture (at + 23 °C)	approx. 780 mPa·s
Compressive strength	> 79.1 N/mm² (average)
Bending tensile strength	> 12 N/mm²
Tensile strength (C25/30)	3.9 N/mm² (failure concrete)
CO_2-Permeability	s_D > 200 m
Water vapour permeability	s_D= 175 m (Class III)

Fields of Application

KÖSTER CT 121 is used as a primer for mineral based substrates before applying KÖSTER Epoxy coating and flooring products (after not longer than 48 hours). Mixed with kiln dried quartz sand KÖSTER CT 121 is also used for making trowelable filler material for interior and exterior application for the following application of epoxy and polyurethane coatings. KÖSTER CT 121 is especially suitable as a primer for KÖSTER CT 221 in the KÖSTER OS 8 System.
KÖSTER CT 121 as drainage mortar can also be used as a leveling layer for e.g. balconies or terraces.

Substrate

The surface to be sealed must be clean, absorbent, free of dust, oil and grease and other adhesion reducing substances. Any kind of surface contamination like adhesives, coatings, curing compounds, efflorescence, dust, grease, oils, etc., have to be removed completely

CT - Coatings

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by shot blasting. Smooth concrete surfaces must be roughened by sand or shot blasting. The substrate must have a minimum adhesive tensile strength of 1.5 N / mm². The surface and room temperature must be a minimum of + 5 °C. During application and for the first 12 hours of curing the surface must have a minimum + 3 °C above the dew point. The concrete must be free of alkali sensitive aggregates, and the surface free of water soluble silicates as often found in surface hardeners, sealing agents, and crystalline waterproofing products.

Application
Mix the components, which have been tempered between +15 °C and +25 °C, vigorously for 3 minutes until a homogeneous consistency is obtained. Use a mechanically driven double mixer (less than 400 rpm). To avoid mixing errors, it is necessary to re-pot and remix. Maintain a dew point of +3 °C during application.

Use as a primer
The well tempered and unfilled material is evenly spread with a rubber squeegee without any additives and is rolled over with a short napped roller, e.g. KÖSTER Resin Roller 150/250. On highly absorbent substrates a second primer coat or alternatively a scratch coat may be necessary.
Depending on the intended use, it may be necessary to broadcast the fresh primer with kiln-dried quartz sand (grain size 0.4 - 0.8 mm) over the entire surface, but not in excess

Use as a scratch coat
Scratch coats are applied with a trowel or squeegee and are typically applied directly over the substrate. They may also be broadcasted, depending on the application. Excessive amounts of broadcast material may sink into the scratch coat.
We recommend adding KÖSTER KB-Pox Thickening Agent 0.5 to 1 % by weight of the mixture to avoid separation of resin and quartz sand.
Directional formulation: KÖSTER CT 121 to quartz sand (grading curve 0.2 - 0.8 mm or 0.06 - 0.36 mm) 1 : 1 (by weight).

Use as a flowing mortar
Flowing mortars are applied in a minimum layer thickness of 3 mm, e.g. with a notched trowel, and may also be broadcasted, depending on the application. Excessive amounts of broadcast material may sink into the scraper filler.
We recommend adding KÖSTER KB-Pox Thickenng Agent 0.5 to 1 % by weight of the mixture to avoid separation of resin and quartz sand.
Mixing ratio: KÖSTER CT 121 to quartz sand (grading curve 0.06 - 0.36 mm) 1 : 1.8 to 1 : 2.6 (by weight).

Use as an epoxy screed
Epoxy resin screeds are applied by means of rails, a screed trowel, etc. The epoxy resin screed is installed "fresh in fresh" into the previously applied primer KÖSTER CT 121. In order to ensure a good adhesion of the layers, the fresh primer is broadcasted with kiln-dried quartz sand, grain size 0.06 - 0.36 mm (consumption up to 4 kg/m²).
Mixing ratio: KÖSTER CT 121 to quartz sand (grading curve 0.06 - 0.36 mm (33 %) and 0.35 - 1.6 mm (67 %) 1 : 6 to 1 : 9 (by weight).
For a 1 m² screed layer with a thickness of 1 cm at a mixing ratio of 1 : 6 (by weight):
approx. 2.7 kg KÖSTER CT 121 plus
approx. 5.4 kg quartz sand 0.06 - 0.36 mm plus
approx. 10.8 kg quartz sand 0.35 - 1.6 mm

Use as drainage mortar
1 kg KÖSTER CT 121 is mixed with 25 kg bag of kiln dried quartz sand of 2 - 3 mm grain size. KÖSTER CT 121 has only a bonding effect. The drainage mortar is to be applied in a layer thickness of at least 4 cm.
Mixing ratio KÖSTER CT 121 to quartz sand (grading curve 2 - 3 mm) 1 : 25 (by weight)
For a 1 m² drainage mortar layer with a layer thickness of 1 cm in a mixing ratio of 1 : 25 (by weight) approx:
approx. 2.4 kg KÖSTER CT 121 plus
approx. 60 kg quartz sand 2 - 3 mm

Use in OS 8 system (tested according to DIN 1504-2 and DIN V 18026):
Kiln dried quartz sand, grading curve 0.06 - 0.36 mm (CT 483 025), is mixed into the primer KÖSTER CT 121 in a mixing ratio of 1 : 1 by weight and applied evenly (consumption: 800 g/m² KÖSTER CT 121 and 800 g/m² quartz sand). Subsequently, a full-surface broadcast with quartz sand grading curve 0.4 - 0.8 mm (CT 488 025) is applied (consumption approx. 4.0 kg/m²).

For further information please refer to the Technical Data Sheet KÖSTER CT 221.

Consumption
400 g / m² (0.4 mm layer thickness)

- as an unfilled primer: approx. 300 - 500 g/m².
- as scratch coat: approx. 750 g/m²/mm layer thickness plus quartz sand
- as flowing mortar: approx. 500 - 700 g/m²/mm layer thickness plus quartz sand
- as epoxy resin screed: approx. 270 g/m²/mm layer thickness plus quartz sand
- as drainage mortar: approx. 240 g/m²/cm layer thickness plus quartz sand
- in OS-8 system: approx. 800 g/m² plus quartz sand

For use in the OS 8 System see also the Technical Data Sheet for KÖSTER CT 221.

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

Packaging

CT 121 001	1 kg combipackage
CT 121 006	6 kg Kombigeb.; (A) 4,0 kg, (B) 2,0 kg
CT 121 025	25 kg combipackage; component A 16.66 kg; component B 8.34 kg

Storage
Store frost free between + 5 °C and + 25 °C. In originally sealed containers it can be stored for a minimum of 12 months.

Safety
Avoid inhaling the fumes and skin contact. Wear protective clothing, gloves and goggles during processing and application of the material. Make sure the room is well ventilated. In case of skin contact, wash off the material immediately with lots of soap and water. In case of eye contact, flush eyes immediately and thoroughly with water or preferably

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an emergency eye wash bottle. Consult a physician. During processing and application of the material, do not eat, smoke, or handle open flames. The warnings and safety recommendations on the packaging and on the Material Safety Data Sheet and the regulations of relevant professional organisations must be observed and obeyed. Observe all governmental, state, and local safety regulations when processing the material.

Other

The maximum grain size of the kiln dried fillers should not exceed 1/3 of the layer thickness. Liquid polymers react to temperature fluctuations by changing their viscosity and/or curing behavior. The application should only be carried out during falling or constant temperatures. Low temperatures will slow the reaction; high temperatures and mixing large volumes will increase the reaction rate. Protect the coating from moisture of all kinds during application and curing.
A dew point distance of + 3 ° C must be maintained during and for at least 12 hours after the coating work. Coatings must be protected from moisture until they are completely dry. At material temperatures below + 15 ° C, the consistency changes - the material becomes thicker.

Related products

KÖSTER CT 221	Prod. code CT 221
KÖSTER VAP I 2000	Prod. code CT 230
KÖSTER VAP I 2000 UFS	Prod. code CT 234
Quartz Sand 0.35 - 1.50 mm	Prod. code CT 481
Quartz Sand 0.20 - 0.80 mm	Prod. code CT 482
Quartz Sand 0.06 - 0.36 mm	Prod. code CT 483
Quartz Sand 0.18 - 0.50 mm	Prod. code CT 484
Quartz Sand 0.7 - 1.2 mm	Prod. code CT 485
Quartz Sand 1.0 - 2.0 mm	Prod. code CT 486
Quartz Sand 2.0 - 3.0 mm	Prod. code CT 487
Quartz Sand 0.4 - 0.8 mm	Prod. code CT 488
KÖSTER KB-Pox Thickening Agent	Prod. code CT 764
KÖSTER Screed Anchor 6 mm x 70 mm	Prod. code CT 910
Flat Squeegee, hardness: soft	Prod. code CT 921 001
Flat Squeegee, hardness: medium	Prod. code CT 922 001
KÖSTER Toothed blade 28 cm S2.66	Prod. code CT 924 001
KÖSTER Toothed blade 28 cm S2	Prod. code CT 925 001
KÖSTER Toothed blade 28 cm S4	Prod. code CT 926 001
KÖSTER Toothed blade 28 cm S6	Prod. code CT 932 001
KÖSTER Universal Cleaner	Prod. code X 910 010

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