KÖSTER
Waterproofing Systems

KÖSTER CT 225 Bridge Deck Coating

Technical Data Sheet CT 225

Issued: 2023-10-24

- Test report P11169 according to TL-BEL-EP (1999), 5.12.2017 ("Production of concrete bridge coverings", Polymerinstitut, Polymer Institut Kiwa GmbH)
- Test report P 11891 acc. TL-BEL-EP (1999) based on the Danish regulations "ALMINDELIG ARBEJSDBESKIVELSE - BETONBRO - BITUMENASERET - FUGTISOLERING - ABB"
- Test certificate with regard to the adhesive tensile values of the KÖSTER CT 225 reactive resin primer on young concrete; 8.3.2019
- Certificate of Analysis (ISO 9001:2015); Adhesion to Steel (DIN EN ISO 4624); Laboratory (QA) KÖSTER BAUCHEMIE AG
- Fundamentl test KÖSTER CT 225 Bridge Deck Coating within the scope of TL-BEL-EP 1999 and "Bitumen Based Waterproofing -GWS"; Laboratory KÖSTER BAUCHEMIE AG

Priming and coating epoxy resin for concrete road sections, bridge decks, and civil engineering structures for overworking with mastic asphalt according to ZTV-ING (part 7)

CE	**KÖSTER BAUCHEMIE AG** **Dieselstraße 1-10, 26607 Aurich** **20** **CT 225** **EN 1504-2: 2004** **Surface protection product - coating** **Physical resistance (5.1)** EN 1504-2: ZA. 1f
Abrasion resistance	AR 0.5
Capillary water absorption and water permeability	w < 0.5 kg/(m² * h^0.5)
Impact resistance	no cracks or delamination, Class I
Tear-off test to assess the tensile strength	≥ 2.0 (1.5) N/mm²
Behavior in fire after application	Klasse E_{fl}

a) According to the decision of the Commission 2010/85 / EU, the product fulfills the fire class E_{fl} without the need for a test.

Features

KÖSTER CT 225 is a thermally stable two component priming epoxy used for concrete road sections, bridge decks, and civil engineering structures. It is especially suitable due to its high chemical resistance against de-icing salts, mineral oils including fuel oils, and permanent contact with water as well as many other substances which can damage concrete structures. KÖSTER CT 225 can be used at low temperatures (> + 8 °C) and can be used on concrete as young as 7 days.

Technical Data

Mixing ratio	3.3 : 1
Density	1.14 g/cm³
Viscosity	450 mPas
Color	Transparent, green
Compressive strength	approx. 50 N/mm²
Bending tensile strength	approx. 12 N/mm²
Pot life	approx. 30 min.
Application temperature	+8 °C to +30 °C
Adhesion to steel	≥ 1,9 MPa
Shore D	approx. 85
Resistance to diesel or 20% sodium hydroxide solution	No loss of Shore D hardness after 28 days

Fields of Application

KÖSTER CT 225 is used to prepare the surfaces of concrete road sections, bridge decks, and civil engineering structures for overworking with mastic asphalt and bituminous membranes. KÖSTER CT 225 can be used as scratch coat to seal the surface of porous materials and to even the roughness of concrete before the application of asphalts and bituminous membranes.

Substrate

The surface must be prepared by shotblasting. Any kind of surface contamination such as adhesives, coatings, curing compounds, efflorescence, dust, grease, oils, etc., have to be removed completely by shot blasting. Smooth concrete surfaces must be roughened shot blasting. The substrate must have a minimum adhesive tensile strength of 1.5 N/mm².

Surface irregularities can be leveled with a scratch coat made from KÖSTER CT 225 mixed with KÖSTER Quartz Sand 0.06 - 0.36 mm mixed 1:1 by weight.

During application and curing the surface must have a minimum +3 °C above the dew point for a minimum of 12 hours. The surface temperature must be a minimum of +8 °C during application and for a minimum of 12 hours afterward.

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

Primer:

The installation is to be executed in accordance with ZTV-ING (Part 7). The two components are mixed with the aid of an electrical stirrer (approx. 300 U/min) for two minutes until a homogeneous consistency is achieved. Repot and stir for another minute. Optionally quartz sand may be added before repotting. The mixed material is spread evenly on the prepared surface (approx. 500 g/m2) with a rubber squeegee. After a reaction time of about 15 minutes, it is backrolled with an epoxy grade short napped roller. Material build-up should be avoided. The fresh primer is broadcast evenly with fire-dried KÖSTER Quartz Sand 0.2 - 0.8 mm, with a consumption of approx. 800 g/m². For the priming of concrete, the surface must be dry. Heating with hot air must not lead to a local lightening of the concrete!).

Sealing:

The two components are mixed with the aid of an electrical stirrer (approx. 300 U/min) for two minutes until a homogeneous consistency is achieved. Repot and stir for another minute. Optionally quartz sand may be added before repotting. The mixed material is spread evenly on the prepared, primed surface with a notched rubber scraper with a consumption of approx. 500 g/m². After a reaction time of about 15 minutes, it is broadcast with KÖSTER Quartz Sand 0.7 - 1.2 mm. to rejection. After curing, excess quartz sand is removed and a second coat of KÖSTER CT 225 is applied, consumption approx. 500 g/m².

Consumption

Primer: Approx. 400 to 500 g/m² depending on porosity of the substrate. Top coat: Approx. 500 g/m² per layer.

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

Packaging

CT 225 020	20 kg metal pail combipackage

Storage
Store the material at +10 °C to +25 °C. If stored in originally sealed packages it can be stored for a minimum of 12 months.

Safety
Wear appropriate Protective Personal Equipment (PPE) when installing the material. Observe all governmental, state, and local safety regulations when processing the material.

Mixed material must be used immediately and entirely after mixing. **Material residues must be stored outdoors as they develop a high reaction heat and smoke may form**. This also applies to large-volume applications.

Other
Liquid polymers react to temperature fluctuations by changing their viscosity and/or curing behavior. Low temperatures will slow the reaction; high temperatures will accelerate the reaction rate. Mixing large volumes will also increase the reaction rate. Coating work should therefore only be carried out at falling or constant temperatures. The instructions given in the Technical Guidelines must be followed.

A dew point distance of +3 °C must be maintained during and for at least 12 hours after coating work. Coatings must be protected from moisture in all forms until completely cured. At material temperatures below +15 °C the consistency changes - the material becomes more viscous.

Related products

Quartz Sand 0.20 - 0.80 mm	Prod. code CT 482
Quartz Sand 0.06 - 0.36 mm	Prod. code CT 483
Quartz Sand 0.7 - 1.2 mm	Prod. code CT 485
KÖSTER Resin Roller 250 mm	Prod. code CT 916
KÖSTER Resin Roller 150 mm	Prod. code CT 917
KÖSTER Universal Cleaner	Prod. code X 910 010

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