KÖSTER
Waterproofing Systems

KÖSTER CT 228 Flex

Technical Data Sheet CT 228

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2-component, viscoplastic, brushable, rollable and sprayable epoxy resin for heavy-duty corrosion protection of concrete and steel surfaces

CE	**KÖSTER BAUCHEMIE AG Dieselstraße 1-10, 26607 Aurich 20 CT 228 EN 1504-2: 2004 Surface Protection Surface - Coating EN 1504-2: ZA. 1f**
Abrasion resistance	AR 0.5
Capillary absorption and permeability to water	w < 0.1 kg (m · h)
Impact resistance	No cracks or delamination, Class 1
Water vapor permeability	SD ≥ 7.3 m (Class II)
Adhesive tensile strength	≥ 2.0 (1.5 N/mm²)
Reaction to fire	Class E fl

Features
KÖSTER CT 228 Flex is a two-component epoxy resin product which, due to its tough elastic properties, can be used for the mechanical and chemical surface protection of concrete and steel. The material is characterized by its high surface hardness and is able to bridge cracks forming in the ground. The material has excellent adhesion to mineral substrates (except gypsum), as well as to steel and stainless steel.

Technical Data

Consistency (+ 20 °C)	ca. 1600 mPa·s
Density	ca. 1.2 kg/l
Mixing ratio (A:B)	3:1
Pot life (+10 °C, + 20 °C)	60 min, 40 min
Color	Similar to pebble grey, RAL 7032 (further colors on request)
Adhesive tensile strength	≥ 1.5 N/mm²
Standard concrete C25	≥ 1.5 N/mm² (failure in concrete)
Steel (DIN EN ISO 12944-4, Ry 50 µm)	> 4 N/mm²
Can be overworked after	approx. 24 h

Fields of Application
KÖSTER CT 228 Flex serves as a protective coating for surfaces made of concrete and steel and can be applied to both horizontal and vertical surfaces (with the addition of 6% KÖSTER KB-Pox Thickening Agent). In addition to its use in industrial plants and agricultural structures (wastewater treatment plants, biogas plants (min. 2 mm layer thickness)), KÖSTER CT 228 Flex is suitable for surface protection for heavily loaded industrial floors. If higher slip resistance than R9 is required, KÖSTER CT 228 Flex can be structured with a variety of kiln-dried broadcast materials or as a scratch coat by stirring in kiln-dried fillers.

Furthermore, KÖSTER CT 228 Flex is suitable as a chemically and mechanically resistant top sealer for broadcast epoxy resin compounds or can serve as a top seal for thick-layered surface protection systems of trafficed areas over a scraped fill.

Substrate
Concrete: dry, free from loose particles. When applying to floors, the substrate is mechanically prepared by means of shotblasting or grinding and subsequent shotblasting, whereby detail and edge areas that are not exposed to a strong mechanical traffic load can be prepared by grinding alone. The substrate is vacuumed off to obtain a dust-free surface. Strong subsurface roughness of mineral surfaces may be treated with a scratch coat primer or an epoxy resin screed, for example with KÖSTER CT 121 or with KÖSTER leveling compounds (such as KÖSTER SL Protect or indoors with KÖSTER SL Premium or KÖSTER SL Flex). If the concrete substrate shows cracks, they are flush-sealed with KÖSTER KB-Pox IN through saturation and then broadcast with fire-dried quartz sand, if necessary. In wall areas, the concrete surface is mechanically prepared by sandblasting to obtain a rough surface free of adhesion-reducing substances.

The adhesion values of prepared concrete surfaces must not be less than 1.5 N / mm². Damaged concrete surfaces are to be removed down to healthy concrete. The surfaces must be free of acids or other contamination. The prepared concrete surface must be primed with KÖSTER CT 121, or with a scratch-troweled primer until it is even and free of voids.

If moisture from behind the slab is to be expected, prime with KÖSTER VAP I 2000.

Steel: dry, free from loose components, free from oil and grease. Steel surfaces must be prepared in accordance with DIN ISO 12944-4 by means of blasting to a degree of purity of at least SA 2 ½, (mean roughness of at least 50 µm) or in the case of manual removal by means of a steel brush to SA 3. Weld beads and seams must be removed. Edges must be smoothed by grinding and can optionally be revised with KÖSTER CT 228 Flex (with the addition of 6% KÖSTER KB-Pox Thickening Agent). Dust etc. must be removed without leaving any dry residue.

Application
The processing temperature must be at least +3 ° C above the dew point (see KÖSTER dew point table at www.koster.eu). The components must have a temperature between + 15 ° C and + 25 ° C, and are mixed intensively with a mechanically operated stirrer (≤ 300 rpm) until homogenous consistency is reached. After a mixing time of approximately 2 minutes, the material is repotted and remixed for another minute.

For concrete substrates, the application is carried out by means of a

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notched trowel, which is adjusted to the planned layer thickness. For layer thicknesses above 0.5 mm, roll with a spiked roller in two directions. As a top coat, rewind with a short-napped epoxy grade roller (such as a KÖSTER Resin Roller 250 mm) in two directions. The minimum consumption as sealant is 600 g / m2.

Steel: For steel, the material is applied with a PE foam roller, spray application, or brush in at least two layers. The waiting time between layers may not exceed 24 hours and before the application of the second layer the first layer must be tack-free. Optionally, the first layer can be installed with KÖSTER Corrosion Protection, if increased anti-rust protection is required. For the coating of vertical surfaces, 6% KÖSTER KB-Pox Thickening Agent is mixed in before application.

Consumption
Concrete: min. 1.2 kg/m²/mm; Steel: 650 g/m² (500 µm)

Cleaning
Clean tools immediately after use with KÖSTER Universal Cleaner.

Packaging

CT 228 006	6 kg combipackage

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 breathing vapors and skin contact. Wear protective gloves and safety glasses as well as other suitable protective Observe the hazard warnings on the containers and the safety advice on the safety data sheets. Observe all governmental, state, and local safety requirements when installing 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

KÖSTER CT 121	Prod. code CT 121
KÖSTER VAP I 2000	Prod. code CT 230
KÖSTER Corrosion Protection	Prod. code CT 283
KÖSTER KB-Pox Thickening Agent	Prod. code CT 764
KÖSTER Spiked Roller	Prod. code CT 914 001
KÖSTER Resin Roller 250 mm	Prod. code CT 916
KÖSTER KB-Pox IN	Prod. code IN 231
KÖSTER VAP I 06	Prod. code SL 131 009
KÖSTER SL Premium	Prod. code SL 280 025
KÖSTER SL Protect	Prod. code SL 286 025

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