KÖSTER
Waterproofing Systems

KÖSTER CT 290 Pure Shield

Technical Data Sheet CT 290

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- Certificate of Analysis (ISO 9001:2015) KÖSTER CT 290 Pure Shield, Tensile Strength acc. to ISO 527-2

Two-component fast reacting polyurea coating for roofs, terraces, bridge decks and industrial facilities

CT - Coatings

Features

KÖSTER CT 290 Pure Shield is highly durable, fast-curing, and flexible coating or lining material created by the chemical reaction of an isocyanate component with an amine resin. Our pure polyurea contains no polyurethane and it is made of 100% amines (0% polyol). This high performance material offers an exceptional resistance to abrasion, chemicals, and water, making it ideal for industrial, commercial, and infrastructure applications. Applied using a two-component spray system, our real pure polyurea forms a seamless, waterproof membrane within seconds, even in extreme temperatures and humidity.

Advantages

- Rapid Cure Time
- Seamless, Monolithic Membrane
- Excellent Waterproofing & Chemical Resistance
- Extreme Durability
- High Flexibility & Crack Bridging
- Weather Resistance (for UV exposure install topcoat)
- Excellent Adhesion to Most Substrates
- Low Maintenance
- VOC-Free & Environmentally Friendly Options
- Versatile Application
- Highly crack bridging

Technical Data

Material basis	Polyurea
Mixing ratio (volume)	1:1
Geltime	Approx. < 5 sec.
Curing Time	17-19 sec.
Reaction time	5 sec
Viscosity A-Comp.	Approx. 950 mPas (23 °C)
Viscosity B-Comp.	Approx. 820 mPas (23 °C)
Color	Light Grey (Approx. RAL 7035)
Application temperature	+5 °C bis +40 °C (Air)
Operation Temperature	-30 °C bis +120 °C
Density at 23 ºC ISO 1675	1.200 kg/m³
Elongation at break	at 23 °C >100 %
Tensile Strength 10 d	at 23 °C >10 MPa
Hardness (Shore A)	at 23 °C > 90
Hardness (Shore D)	at 23 °C > 45
Reaction to fire	Euroclass E
Tack free time	at 23 °C ± 5 seconds
Setting time at +23 °C	10 seconds
VOC content	0 (solids content 100 %)
Application thickness	1.5 mm
Consumption	1.8 kg/m²

Fields of Application

KÖSTER CT 290 Pure Shield can be used for waterproofing and protection of sloped and flat roofs, balconies, decks, bridge Decks, tanks and irrigation canals, retaining walls, waste water treatment plants, swimming pools, and foundations.

Substrate

Concrete

Any depressions or voids should be filled using an epoxy resin mortar. See the Technical Data Sheet for KÖSTER CT 121 for further instructions. The concrete must be completely cured or the substrate should be verified depending on the primer used. All laitance and formwork release agents must be removed and an open pore surface achieved by shotblasting, grinding or grit blasting to achieve a Concrete Surface Preparation index -CSP- of 3 to 6. We recommended CSP 3 to CSP 4. Apply the primer in the conditions and with the parameters indicated on the Technical Data Sheets for the respective products.

Repairs

In cases where the membrane repair is necessary, cut and removal of the affected area and/or damaged surfaces by sanding extending the area by approximately 20 - 30 cm. Clean the area thoroughly of all dust and particles. If possible do not use water, if necessary, allow to dry completely. Apply a thin layer (50-100 g/m²) of polyurethane resin primer. Lightly broadcast kiln dried silica sand over the wet primer and allow to completely dry before application.

Application

The surface should be flush. Fill in depressions, eliminate unevenness, and remove old waterproofing layers. Clean the surface or substrate removing any dust, dirt, grease, silicones, or efflorescence. Adhesion tests may be required for certain substrates. General application thickness is 1.5 mm.

Homogenize the pigmented A-comp. before use. The general parameters for this material are as follows:

Heater isocyanate temperature ±75 °C
Heater amines temperature ± 70 °C
Hose temperature ±70 °C
Pressure Approx. 170 bar.

As an example excellent results have been achieved with a Graco Reacor E-10Hp using a Graco Fusion AP spraying gun over a AW 2222 spraying tip or with a Graco 2E -XP2 at 170 bar over a AR 2929 spraying tip.

These temperature and pressure parameters must be verified by the applicator. Environmental conditions may alter setting parameters.

Consumption

1.8 kg/m² = 1.5 mm

Cleaning

Immediately after use with KÖSTER PUR Cleaner

Packaging

CT 290	380 kg combipackage (Drums): A-Comp. 200 kg | B-Comp. 180 kg

Storage

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Store the material at temperatures between +5 °C and +25 °C; in originally sealed packages, the material can be stored for a minimum of 12 months.

Safety
Avoid inhaling the fumes and skin contact. Wear protective clothing, gloves and goggles and full respiratory protection 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 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 organizations must be observed and obeyed. Observe all governmental, state, and local safety regulations when installing the material.
Contains diisocyanate. When working with the material, work clothing that covers arms and legs or a protective suit must be worn. When working in confined spaces or in the "overhead area" hoods or covers must be worn. Wear suitable protective gloves (e.g., nitrile gloves) and protective goggles. When processing the material, pressure is created.

Other
A dew point distance of + 3 ° C must be maintained during and for at 1 hour after the coating work. Coatings must be protected from moisture until they are completely dry.

Related products

KÖSTER CT 121	Prod. code CT 121
KÖSTER PUR Cleaner	Prod. code IN 900

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