OMNITEK® CPC

Corrosion protection and bonding primer

Product Description

OMNITEK® CPC is a single component cement based primer for corrosion protection of steel reinforcement bars according to EN 1504-7 and bonding for cement based repair systems.

Advantages

- High passivation capacity, effectively stopping active corrosion.
- High adhesion to steel and perfectly compatible with cement based repair mortars and concrete.
- One component solution with fast, easy and cost effective application by brush.
- White color, allows to control the coverage for a complete and durable application.
- Compatible with all OMNITEK® and BETEC® cement based repair mortars and concrete.
- CE certified according to EN 1504-7.

Field of Application

OMNITEK® CPC is used for:

- Corrosion protection of steel reinforcement bars according to EN 1504-7.
- Treatment of reinforcement bars where:
  - Available depth of cover is <10mm
  - Concrete is contaminated with chlorides
  - Cleaned reinforcement is exposed for longer time before repair.
- Bonding primer for cement based repair systems.

Certification

- CE certified according to EN 1504-7.

Product Properties

Technical Data/Properties(*)

		OMNITEK® CPC
Properties	**Unit**	**Value***
Consistency	[-]	Smooth & creamy
Application thickness	[mm]	2 layers of ≥1mm/layer
Maximum water quantity	[l /10 kg]	2.2
Open time	[min]	≈ 30
Application temperature	[°C]	+5 to +35
Recoat time(***)	[hours]	≈ 1
Density	[kg/dm³]	≈ 1.21
Consumption(**)	[kg/m²/mm]	≈ 1.5
Slant shear adhesion to steel (0,1mm displacement)	[kN]	4.5
Corrosion protection	[-]	Pass EN 15183.
Shelf life	12 Months Stored under cover, clear of the ground, protected from all sources of moisture and frost.	
Packaging	Plastic pails of 10 kg. 33 pails per pallet (330kg)	
Appearance	White powder	

(*)Typical values in production control. All tests were executed under a conditioned temperature of 21°C and 65% RH.
(**)Consumption needs to be estimated by the designer, since it depends on the surface roughness of the concrete and reinforcement bars. A minimum consumption of 2x1mm is needed for effective corrosion protection of reinforcement bars.
(***) Recoating time depends on ambient conditions and should be applied when the first layer is sufficiently cured.

Application

1. Preparation of Substrate

- Substrate preparation has to be according EN 1504-10 part 7.
- The substrate has to be free from dirt, grease, laitance, loose concrete, loose particles or layers which could adversely affect adhesion.
- Remove all damaged concrete and prepare substrate by sand or grid blasting, high pressure water jetting, or other methods until base concrete is exposed, offering sufficient roughness (bond) and open pores.
- Cut all damaged concrete back to a minimum of 20mm behind the exposed and corroded reinforcement steel. The application area needs to be 50mm wider than the edges of the corrosion on the steel reinforcement.
- Remove all rust and scale from the reinforcement steel by sand or grid blasting, high pressure water jetting, or other methods.
- The substrate must be pre-wetted with clean water until saturated. The substrate should be damp, but without free standing water. The reinforcement bars can be slightly humid prior to the application of OMNITEK® CPC
- The substrate must be frost-free and have a cohesion of minimum 1.5 N/mm².

2. Mixing

- The product is mixed in a suitable container with clean water by using a forced action mixer. Alternatively a paddle mixer, mounted on a slow speed drill can be used. The mixing head must be completely immersed in the powder.
- Add 4/5 of the required quantity of water into the mixer and mix for 3 minutes. Add the remaining quantity of water. The water content can be varied to obtain the desired consistency. Never use more than the maximum water quantity. Mix for an additional 1 minute until a lump-free, homogeneous mixture is obtained.
- The mixing time depends on the type of mixer. 4 minutes is the minimum.
- Once the material is ready mixed, apply immediately. Do not prepare more material than can be used within the open time of the material.

3. Application

- Apply the mixed material with a soft brush in an even layer of minimum 1 mm thickness to the full circumference of the exposed and prepared concrete and/or reinforcement steel and allow curing for minimum 1 hour depending on ambient temperature.
- Apply a second layer of minimum 1 mm thickness when the first layer is sufficiently cured.
- Do not apply the material when the temperature is below 5°C, or expected to fall below 5°C in the next 24h.

4. Curing

- Curing and setting times will depend on ambient and substrate temperatures.
- Allow the material to cure for minimum 2 hours before applying a repair mortar.

5. Cleaning and maintenance

- Mixing and application equipment should be cleaned immediately with clean water. Hardened material needs to be removed mechanically.

6. Special remarks

- Cementitious materials can lead to incompatibilities under certain conditions in combination with non-ferrous metals (such as aluminium, copper, zinc).
- Low temperatures delay the setting of the material. High temperatures accelerate the curing and decrease the open time of the material.

CE Certificate

CE
0921
De Neef Construction Chemicals bvba Industriepark 8 2220, Heist-op-den-Berg Belgium
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GCPHEI-110826-01
0921-CPR-2150
EN 1504-7
Reinforcement corrosion protection

Health & Safety

OMNITEK® CPC is a product based on cement and can therefore cause burns to skin and eyes, which should be protected during use. Wear gloves and protective eye shields. Wearing a dust mask is advised. Treat splashes to eyes and skin immediately with clean water. Consult a doctor when irritation continues. If accidentally ingested, drink water and consult a doctor. Users must comply with all risk and safety phrases. MSDS's can be obtained from GCP Applied Technologies or from our website. GISCODE ZP1.

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GCP Applied Technologies Inc., 2325 Lakeview Parkway, Alpharetta, GA 30009, USA
GCP (Singapore) Pte. Ltd, 25 Tanjong Penjuru, Singapore 609024.
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