Silcoat CN100

CEMENTITIOUS ANTI-CORROSIVE REBAR PROTECTIVE COATING WITH CORROSION INHIBITOR

DESCRIPTION Silcoat CN100 is a two component, cement based, polymer modified, protective coating with corrosion inhibitor that prevents oxidation and corrosion of the reinforcing steel and metal.

USES

Silcoat CN100 is used for:

- Protection of metal structure from corrosion Repair of damaged reinforced concrete with corroded reinforcing bars resulting from carbonation
- Protection of reinforcement against the action of calcium chlorides and de-icing salts
- Preventive protection of reinforcing bars in slim reinforced concrete sections and filigree constructions
- Improving adhesion between reinforcing steel and mortar or concrete, either in construction or repair of a structure
- Particularly beneficial for protection of reinforcing steel in structures exposed to aggressive environments

CHARACTERISTICS / ADVANTAGES

- Ready to use, just mix the components
- Prevents corrosion of reinforcing steel
- Easy to use
- Excellent adhesion to steel
- Good bonding coat for subsequent cement and epoxy-based repair mortar
- Good barrier effect against water, chlorides and CO2
- Contains corrosion inhibitors
- Non-flammable
- Can be spray applied using suitable spray equipment

PRODUCT INFORMATION

Chemical Base Portland cement, polymers and corrosion inhibitors

Packaging Part A+B pre-batched

Part A	5 kg plastic container
Part B	10 kg bag

Appearance / Colour

Part A+B mixed	greyish green
Part A	white liquid
Part B	cement grey powder

Shelf Life:
12 months from date of production

Storage Conditions:
Store in a cool place, under the roof and in unopened original packing. Transport in closed vehicles, protected from humidity and rain. Protect Part A from frost and Part B from moisture.

Density:

Part A+B mixed	1.80–2.00 kg/L at +27 °C
Part A	~1.01 kg/L at +27 °C
Part B	~1.02 kg/L (bulk density) at +27 °C

TECHNICAL INFORMATION

Tensile Adhesion Strength:
1–2 N/mm2 (EN 1542)

Carbonation Resistance:
2 mm Silcoat CN100 = 25 mm of normal mortar

APPLICATION INFORMATION

Mixing Ratio:
Part A : Part B = 1 : 2 (by weight)
Consumption:
Average minimum consumption of the mixed system is 0.8 kg/m2 for 2 coats on metal surface, use multiple coats for desired level of thickness and protection
Layer Thickness:
~0.5 mm in 2 coats
Ambient Air Temperature:
+5 °C min. / +40 °C max.
Substrate Temperature:
+5 °C min. / +40 °C max.
Pot Life:
~20 minutes at +30 °C

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Waiting Time / Over coating:
2–3 hours at +20 °C

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT:

The steel must be clean, free of loose rust, grease or other foreign substances. Clean by mechanical means to achieve minimum commercial grade either by sand blasting or thorough cleaning with steel brush. Rust removers such as Silkon RR are also suitable for preparation of reinforcing steel.

MIXING:

Silcoat CN100 can be mixed with a low speed (< 250 rpm) electric drill mixer. Only mix as much material as can be safely applied within the pot life. Fill part A (liquid) into a suitable mixing container and add the corresponding quantity of part B (powder). Mix the two components together for a minimum 3 minutes, minimizing addition of air. Leave to stand for 5–10 minutes until mixed coating material exhibits a brushable, weakly dripping consistency.

APPLICATION:

Apply the first coat approx. 1 mm thick layer onto the prepared reinforcing steel with a medium stiff brush.
It is unavoidable that Silcoat CN100 will also be applied onto the surrounding concrete. The second coat is applied in the same way after a waiting time of 2–3 hours (at +20 °C). Subsequently cement based mortar repairs can be applied after the same waiting time. The waiting time is approx. 24 hours for synthetic resin based mortars. If repairs are to be delayed, the second layer of Silcoat CN100 to be broadcast with 0.4–0.7 mm quartz sand immediately after application and allowed to harden. To achieve greater protection, a third layer can be applied when second has dried for 12 hours. Spray application is also possible with suitable sprayer machine.

CURING TREATMENT:

The reinforcement once coated shall be kept for air curing for 3–4 hours before used.

CLEANING OF TOOLS:

Clean all tools and application equipment with clean water immediately after use. Hardened / cured material can only be removed mechanically.

LIMITATIONS:

- Avoid application in direct sun and / or strong wind and / or rain.
- Do not add water.
  Once Silcoat CN100 is applied on reinforcement bars, protect from rain for at least 6 hours.
- Apply only to sound, prepared substrates.
- Mix the product periodically during application.
  After losing its workability, the product must be discarded.
- NOT recommended for use with fast setting concrete or mortar.
- In case of possible chemical attack to the reinforcement the use of Silkon Zink Rich Primer (Epoxy Based).

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