CWC®SMART MARINE

Acrylic Polymer Based Coating for Corrosion Protection of Steel

Description

CWC®SMART MARINE is a single component alkaline compound, based on liquid polymer blends admixed with special chemicals, as a corrosion inhibitor/passivator. This compound is mainly used as a corrosion inhibiting coating applied on concrete rebar or steel surfaces and concrete in marine/coastal environment and underground structures.
It only needs to be mixed with cement at site to produce an easily brushable coating.

Indicative Characteristics

Form	Milky white liquid
Specific Gravity at 27°C	1.03 ± 0.02
Chloride content, % w/w, as per BS 5075	Nil
pH value	>11
Mixing Ratio for bond strength	Smart Marine : Cement, 1:2 by weight
Slant-shear Bond Strength, at 7 days, N/mm² ASTM C882	>2, (concrete failure)
Adhesion to Steel	Excellent
Toxicity	Non-toxic

Domains of Application

CWC®SMART MARINE is mainly used for:

- Corrosion inhibitor/ passivator coating for concrete reinforcement steel, steel structures in sea or fresh water, saline environment.
- Bridge decks, ship decks, sheet pilling walls, Structural steel members, interior and exterior surfaces of water tanks, above ground and underground tanks and pipes.
- Bond coat for concrete with steel and/or reinforcement.

Method of Application
Surface Preparation

Any corroded steel in the repair area and all loose scale and corrosion deposits should be fully exposed. Steel should be cleaned to a bright condition paying particular attention to the back of exposed steel bars. Grit-blasting is recommended for this process. Where corrosion has occured due to the presence of chlorides, the steel should be high-pressure washed with clean water immediately after grit-blasting to remove corrosion products from pits and imperfections within its surface. For difficult situation, rust can be additionally removed chemically by using rust remover (**CWC®RUST ERASE**).

Mixing

CWC®SMART MARINE is mixed with neat fresh cement in the ratio of 1 : 1.5 or 2 by weight with a help of low speed (300-400 rpm) paddle mixer. The mix has to be stirred thoroughly, until a lump free smooth slurry is obtained.

Apply the mixed material on prepared surface by means of brushes, rollers or dip in immersion bath for reinforced steel.

Application

The application of **CWC®SMART MARINE** must take place as soon as possible to a dry steel surface after completion of the preparation work but always within 3 hours. One full and unbroken coat of **CWC®SMART MARINE** shall be applied by suitable brush making sure the surfaces of the steel are properly coated. A small brush is generally suitable for this purpose. It shall be allowed to dry fully before continuing. If in doubt of having achieved an unbroken coating, a second application should be made as soon as the first coat is fully dry (generally between 60 minutes and 90 minutes) The application of concrete repair materials should proceed as soon as the **CWC®SMART MARINE** is fully dry (generally 60 minutes to 90 minutes). Minimum application temperature for **CWC®SMART MARINE** is 10°C.

Concrete Works
Construction Chemicals
Private Limited

DAkkS Deutsche Akkreditierungsstelle D-ZM-16058-01-00

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Advantages

- Can be applied on moist surfaces
- Bonds well to steel and even galvanized steel
- Allows vapor pressure to pass through the coating there by prevents the possibility of blistering of the coating.
- U. V. rays do not have any effect.
- Mild acid and strong base do not destroy the coating.
- Provide a dust free surface.
- Non – inflammable and non – toxic.
- Most of the physical properties improve with age.
- Keeps the adhering concrete alkaline in RCC.

Shelf Life & Storage

12 months from the date of manufacturing when stored in un-opened, original sealed and dry condition at a temperature range from +5°C to 40°C

Packing

5kg & 20kg Plastic Container.

Precautions

- Presence of strong acid may deteriorate the coatings.
- Should not apply to any surface having temperature below 10°C.
- Apply the first coat immediately after the mixing is over and the second coat is to be followed before the first coat becomes hard.
- All the mixed materials are to be consumed within 1/2 hours.
- Allow to air cure in the first four hours and then cure for further 48 hours by water spray.

Safety

Wear hand gloves, safety shoes and safety goggles while using and handling the product. In case eyes or mouth are affected wash with plenty of clean water and seek medical treatment immediately.

Before use, refer to the Material Safety Data Sheet.
The MSDS is available on www.cwcchemicals.com

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