



Concrete Works
Construction Chemicals
Private Limited

CWC®SMARTCRETE

Acrylic Polymer Based Waterproof Protective Coating and Repairing Compound

Description

CWC®SMARTCRETE is an acrylic polymer used as cementitious waterproof coating and repair mortar for concrete structure. When **CWC®SMARTCRETE** Polymer is mixed with cement, a liquid slurry is formed and this slurry used as waterproof coating.

Indicative Characteristics

Form	Milky white liquid
Specific Gravity at 27°C	1.03 ± 0.02
Solid content, % (w/w), as per IS13435	30±3
Mixing Ratio as waterproof coating,	CWC®SMARTCRETE : Cement 1:2 by weight
pH Value, as per IS 13435	7-9
Chloride content, % w/w, as per BS 5075	Nil
Coverage (Theoretical) as waterproof coating	2-2.5 m ² /kg in two coats
Coverage as polymer mortar, kg/10mm/m ²	3 (Mix Ratio CWC®SMARTCRETE : Cement: Sand 1:2:6)
Mixing Ratio as repair putty	CWC®SMARTCRETE : Cement: Fine Sand 1:2:4
Initial cure at 27°C, for pedestrian traffic	After 24hours
Slant-shear Bond Strength, at 7 days, N/mm ² ASTM C882	>2, (concrete failure)
Full cure, days	7

Domains of Application

CWC®SMARTCRETE polymer modified mortar is ideal for use in new areas, as well as in renovation work for surfacing, protecting, waterproofing, bonding old concrete to new concrete, gunniting, sprayed mortar, repairs to concrete, brick work, masonry, and also as filling material for joints, grooves, etc. **CWC®SMARTCRETE** polymer is recommended for waterproofing of basements, toilets, roof gardens, terraces, swimming pools and water tanks and general concrete repairs.

Method of Application

Surface Preparation

Prior to application of **CWC®SMARTCRETE**, all surfaces must be prepared properly to avoid failure. The surface shall be cleaned to remove all dust, foreign materials/loose particles or any deposits of contaminants, which could affect the bond between the original substrate and the **CWC®SMARTCRETE** system. This can be done by scarifying, grinding, water blasting, acid washing or any other approved method. Rectify depression / honey-comb (if any) in the surface, use **CWC®SMARTCRETE** mortar before application of **CWC®SMARTCRETE**.

Mixing

CWC®SMARTCRETE polymer is mixed with neat fresh cement in the ratio of 1:2 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.

Application

All concrete surfaces (flat and vertical /inclined) shall be thoroughly pre-wetted to saturated surface dry condition; at the same time there should not be any standing water on the surface prior to application of **CWC®SMARTCRETE** system. Remix the content again with a spatula and start application by brush, roller or any suitable tools on prepared surface. Minimum two coats are recommended. More number of coats can be provided depending on job requirements. First coat should be allowed to air dry for 5-6 hours. Where more tensile strength is required **CWC®SMARTCRETE** coating should be reinforced with non-woven glass fibre mesh

As Repair Mortar

For repair mortar, **CWC®SMARTCRETE** polymer shall be mixed with fresh cement and silica sand or washed good quality natural sand (Zone –II) as per recommended proportion in a small pan type / drum type concrete mixer. Saturate the concrete surface with water prior to application of **CWC®SMARTCRETE** MORTAR and finish it with steel trowel or any other standard method.



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Curing

After application of **CWC®SMARTCRETE** system, initial air-drying shall be done for 3-6 hours. During this period, no water should be used for curing. If there is a chance of rain or hot (temperature above 40°C), windy atmospheric conditions within this period, protect the coating by covering with waterproof plastic sheet. After a maximum period of 6-8 hours after the final application, moist curing shall be done for the next 2-3 days, either by spraying water or by using wet burlap. During this period, the **CWC®SMARTCRETE** coating at no point of time should be left completely dry or submerged in water. After the moist curing the **CWC®SMARTCRETE** coating shall be allowed to air dry for 3 days before submersion in water.

Advantages

- Resistant to UV (Ultra - Violet) rays
- Develops excellent bond with most of the building materials.
- Prevents peeling and blistering
- Arrests salt petre and prevent penetration of salts into concrete and mortar.
- Unaffected by chemical attacks ranging from mild acids and strong alkalis.
- Highly durable in continuous wet service condition.
- One time application, properties improve with age.

- Versatile product – can be used for waterproofing, bonding agent for old concrete to new concrete and repair mortar.

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, 100kg and 200kg HDPE drum.

Precautions

Reinforcement rods and other sharp materials should not be dragged over the **CWC®SMARTCRETE** membrane, as this can puncture the same. **CWC®SMARTCRETE** shall always be used with cement for the indented purpose as mentioned above.

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