

CWC®SMARTCEM PMC 40

Polymer Modified Fiber Reinforced Non-Structural Concrete Repair Mortar

Description

CWC®SMARTCEM PMC 40 is a single component cementitious, polymer modified non-reactive selective fiber reinforced repair mortar to provide excellent properties as well as resistance to corrosion and carbonation and shrinkage cracking. **CWC®SMARTCEM PMC 40** can be applied in thickness from 10 mm to 40 mm in vertical and 25 mm in overhead situation. It is suitable to apply by hand trowel or by special mortar spray machine.

Indicative Characteristics

Appearance	Free flowing grey powder
Compressive Strength, N/mm² (Typical) at 27°C	(W/P= 0.16)
3day	>20
7days	>30
28 days	>40
Free linear Expansion, ASTM C 827	0.2-2%
Coefficient of Thermal Expansion, per °C	11-12x10 ⁻⁶ (Similar to Concrete)
Flexural Strength, 28 days, N/mm² (Typical) at 27°C	>4
Bond Strength, 28 days, N/mm² (Typical) at 27°C	>2
Pot Life, at 27°C, minutes	>30
Fresh Wet Density, kg/m³	2100 - 2200
Material required for 1m³ Volume, kg	1800-1900

Note: Compressive strength is determined by using 7cm cube specimen at laboratory controlled condition, Water demand may vary depending upon site condition.

Domains of Application

CWC®SMARTCEM PMC 40 is a general purpose cementitious repair compound which is used to reinstate damaged and deteriorated concrete. This product is suitable where above average corrosion and carbonation resistance is required.

Method of Application

Surface Preparation

All surface laitance and unsound concrete must be chipped away so that a reasonable rough, but strong sound surface is provided. All surfaces must be free from oil, grease and dust, this particularly applies to the underside of bed plates, bolts, pipes or concrete surfaces which may have surface contact with the **CWC®SMARTCEM PMC 40**. After cleaning, saturate the concrete surfaces with clean water. Ensure that no free standing water is present on surfaces of foundations or in bolt holes or on the concrete surfaces which to be repaired / encased before applying **CWC®SMARTCEM PMC 40**.

Mixing

For 25 kg powder pack, place about 3.5-4.5 liters fresh water in the mixer and add the total quantity of powder and mix with the machine in operation for 1 – 2 minutes. Depending on the ambient temperature and the desired consistency, a small additional amount of water may be required.

Job placing conditions, including temperatures may require mixing water adjustments as may be essential for practical purposes. Small trial batches to ascertain the best working consistency for the operation are recommended.

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Application

CWC®SMARTCEM PMC 40 shall be applied with a steel trowel on a prepared SSD concrete surface with a thickness from 10mm to 40mm. If the thickness is more than 40mm, another layer shall be applied after 24 hours from the application time of previous layer.

Curing

Curing is very essential for CWC range of CWC®SMARTCEM PMC 40 Mortar. Curing shall be started within 20- 24 hours depending on climatic conditions. Curing shall be done by sprinkling of water (4-6times per day for 7-10 days) for vertical and ceiling surfaces. Good quality curing compound can also be used where water curing is not possible.

Advantages

- Controlled expansion to ensure positive surface contact
- Chloride free and non metallic, hence no rusting or staining on exposed edges
- Excellent bond to the concrete and steel substrate
- Low permeability provides maximum protection against corrosion and carbonation.
- Ready to use - only addition of water is needed at site.

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

25kg waterproof laminated HDPE bag

Precautions

This product is used for patch repair only. Do not apply large area as screed or plaster. If the ambient temperature is more than 40°C during first 7 days of application, cover the applied area with wet hessian cloth for better curing and performance of the mortar. Always apply this mortar on sound surfaces.

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.cwcchemical.in

Regional Offices :

Mumbai :

Office No - 616/617, J K Chambers
Sec-17, Vashi, Navi Mumbai-400703
Maharashtra, INDIA.
091 9920791030

Chennai :

Plot No.3/86-E, Ground Floor
AIEMA Road, Ambattur Industrial Estate
Chennai – 600058 Tamil Nadu, India
091 8939820144

www.cwcchemicals.com,
info@cwchemicals.com