

CWC® Smartcem PMC40










Polymer Modified Fiber Reinforced High Strength Concrete Repair Mortar

Description

CWC® Smartcem PMC40 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 PMC40 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.

Advantages:

-  High strength
-  Can be applied by hand, like conventional mortars
-  Controlled expansion to ensure positive surface contact
-  Extremely low permeability provides maximum protection against carbon dioxide and chlorides
-  Excellent bond to the concrete substrate
-  Shrinkage compensated
-  No site batching required, supplied in pre-weighed prepacked condition
-  Only addition of water at site need – Ready to use
-  Contains no chlorides, hence no rusting or staining on exposed edges

USES

For the reinstatement of concrete in small, localized patch repairs. CWC® Smartcem PMC40 is alkaline in nature and will protect embedded steel reinforcement. It is specially designed for location where high compressive strengths are required. The mortar is suitable where superior resistance is required to chlorides and carbon dioxide.

Appearance	: Free flowing grey powder
Pot Life, at 27°C, minutes	: > 30
Free linear Expansion, ASTM C 827	: 0.2-2%
Flexural Strength, 28 days, N/mm ² (Typical) at 27°C	: >4 N/mm ²
Bond Strength, 28 days, N/mm ² (Typical) at 27°C	: >2 N/mm ²
Compressive Strength, N/mm ² (Typical) at 27°C	: (W/P= 0.16)
1day	: >20 N/mm ²
28 days	: >45 N/mm ²
Setting time	IST : ~ 3 hrs 15 mins FST : ~ 4 hrs 30 mins
Fresh Wet Density, kg/m ³	: 2150 - 2250
Material required for 1m ³ Volume, kg	: 1850 - 1950
Percentage water absorption (Immersion test) after 24 hrs	: 0.45

Indicative characteristics

The information contained in this data sheet is given to the best of our knowledge and the results from extensive testing to remain as objective as possible. However, it cannot, in any case be considered as a warranty involving our liability in case of misuse or any different use of our products from the "Application" paragraph of this technical data sheet. Some application tests should be carried out before using the product to ensure that the methods of use and conditions of application of the product are satisfactory.





APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

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 PMC40. 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 PMC40.

MIXING

For 25 kg powder pack, place about 3.5-4 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

High temperature working

At ambient temperatures above 35°C, the material should be stored in the shade and cool water used for mixing.

Curing

CWC® Smartcem PMC40 is a cement-based mortar. In common with all cementitious materials, CWC® Smartcem PMC40 must be cured. Surface of the finished CWC® Smartcem PMC40 in a continuous film, is recommended. Large areas should be cured as troweling progresses (0.5m at a time) without waiting for completion of the entire area. In fast drying conditions, supplementary curing with polythene sheeting taped down at the edges must be used. In cold conditions, the finished repair must be protected from freezing.

Limitations

CWC® Smartcem PMC40 should not be used when the temperature is below 50°C and falling. The product should not be exposed to moving water during application. Exposure to heavy rainfall may result in the surface scour. The material should not be applied on large continuous areas in single application as a render. If any doubts arise concerning temperature or substrate conditions, consult the local CWC office.


Safety Precautions

Wear hand gloves, safety shoes and safety goggles while using and handling the product.

Before use, refer to the Material Safety Data Sheet.

The MSDS is available on www.cwcchemicals.com

Packaging

 25kg waterproof laminated HDPE bag

Shelf Life: If stored in unopened containers at normal ambient temperatures, a shelf-life of approximately 6 months.