

# PCM™

## Polypropylene Cementitious Matrix



Building  
&  
Transportation



Oil, Gas  
&  
Industrial



Offshore  
&  
Onshore



Water  
&  
Wastewater



### PRODUCT DESCRIPTION

The CTech-LLC® Polypropylene Cementitious Matrix (**PCM™**) is a one-component, shrinkage - compensated, polypropylene - fiber reinforced cementitious matrix designed to be field installed with CTech-LLC® CFM™ to create a fabric-reinforced cementitious matrix (FRCM) composite system for structural reinforcement applications. This product has been evaluated for concrete and unreinforced masonry strengthening using fabric-reinforced cementitious matrix (FRCM) and steel reinforced grout (SRG) composite systems.

### ADVANTAGES

- Ready to use, mix with water only
- Good adhesion and good mechanical properties
- Good workability
- Durable
- Traditional manual application
- Suitable plaster-spraying machines application

### TECHNICAL DATA

	Unit	PCM™
Appearance / Colour	--	Grey powder
Density	Kg/l	1.5
Fresh Mortar Density	Kg/l	1.35
Maximum Size of Aggregate	mm	1.7
Tensile Adhesion Strength	MPa	>1.0
Water Per 100 Kg of Dry Matrix	Lit.	16-18
Pot Life (at 23°C)	Min.	120

### TYPICAL USES

- Wall stabilization using WallMesh™ System
- Structural Strengthening using FibraGrid™ System

### INSTALLATION PROCEDURE

#### PREPARATION OF SUBSTRATE

Application surfaces shall be clean, sound, and free of standing water at time of application. All dust, laitance, grease, curing compounds, and other foreign materials that may hinder the bond must be removed before installation. All corners to be covered with grid and matrix shall be rounded to a (19 mm) minimum radius using a grinder.

Wet the substrate for at least 24 hours to a saturated surface dry condition prior to FRCM application.

#### MIXING

Start with 90% of the total mixing water recommendation depending on the desired consistency of the shot mortar. Consult the printed instructions on the product package for the maximum recommended amount of mixing water. Mix with a mechanical mixer at least 3 minutes. Add the remaining 10% of the recommended total water if necessary until a homogeneous mixture with the desired consistency is formed. The mixture should rest 1 minute and then remixed another 10 seconds before applying. Do not add additional water after the setting process is started.

#### APPLICATION

CTech-LLC® PCM™ matrix is pumped and projected with traditional shotcrete equipment or manually with a plastering trowel. If required, PCM™ may be used to patch voids and defects no deeper than 51 mm. Place 6–13 mm layer of PCM™ cementitious matrix, then immediately set fiberglass or carbon mesht into wet PCM™ layer. Follow with additional layers of meshes, if required, set into 6–13 mm layers of PCM™. Finish with a final layer of PCM™ at 6–13 mm thick and screed/trowel to desired finish. If a layer of matrix is allowed to cure with more layers to follow, the first layer must be cleaned with water pressure before the next matrix layer can be applied.

## STORAGE & SHELF LIFE

- Store product in a dry area with no exposure to moisture.
- Shelf Life: 12 months from the production date.

## CAUTION

May cause serious eye and skin irritation or damage. When combined with water may cause moderate to severe alkali burns. Contains silica; do not breathe dust. The use of safety glasses and chemically resistant gloves is recommended. Use appropriate clothing to minimize skin contact. The use of a NIOSH-approved respirator is required to protect respiratory tract when ventilation.

---

### CTech-LLC®

CYTEC's Composite Technology  
technical@ctech-llc.com  
info@ctech-llc.com  
www.CTech-LLC.com

---

### IMPORTANT NOTE:

Before using any CTech-LLC® product, the user must review the most recent version of the product's technical data sheet, material safety data sheet and other applicable documents, available at [www.ctech-llc.com](http://www.ctech-llc.com).

### WARANTY:

CTech-LLC® warrants its products to be free from manufacturing defects. Buyer determines suitability of product for use and assumes all risks. Buyer's sole remedy shall be limited to replacement of product. Any claim for breach of this warranty must be brought within one month of the 'date of purchase. CTech-LLC® shall not be liable for any consequential or special damages of any kind, resulting from any claim or breach of warranty, breach of contract, negligence or any legal theory. The Buyer, by accepting the products described herein, agrees to be responsible for thoroughly testing any application to determine its suitability before utilizing.