

**CONCRETE**  
**MAT CLOTH™ GCCM**  
**Concrete Impregnated Fabric**



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TECHNICAL TEXTILE  
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**CONCRETE MAT CLOTH™**

**GCCM®**

Geosynthetic Cementitious Composite Mat

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Concrete Mat Cloth GCCM  
Packed In Rolls  
Before Adding Water.



# CONCRETE MAT CLOTH™ GCCM

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### What is Concrete Mat Cloth(CMC) GCCM?

CMC GCCM is a flexible and soft cement impregnated fabric, that hardens on hydration to form a thin, durable, water proof and fire retardant concrete layer. Essentially, it's concrete on a roll.

CMC GCCM allows concrete construction without the need for plant or mixing equipment. It's very easy, and just add water on the CMC non-waterproof side.

CMC GCCM was made of woven geotextile, nonwoven geotextile, HDPE geomembrane, and 3D structure mesh fabric. The specially formulated dry concrete powder mix will be reinforced by 3D mesh fabric, and sandwiched between porous nonwoven geotextile and water proof HDPE geomembrane.

Once set, the 3D mesh fabric will reinforce the concrete, prevent crack propagation and provide a safe plastic failure mode. The woven and nonwoven geotextile on the top side will offer special protection on the CMC, and offer higher tensile strength for composite.

HDPE geomembrane backing on the bottom surface of CMC ensures the material is completely water proof. CMC GCCM is available in 3 thickness CMC5, CMC8 and CMC13, which are 5,8 and 13mm thick respectively.



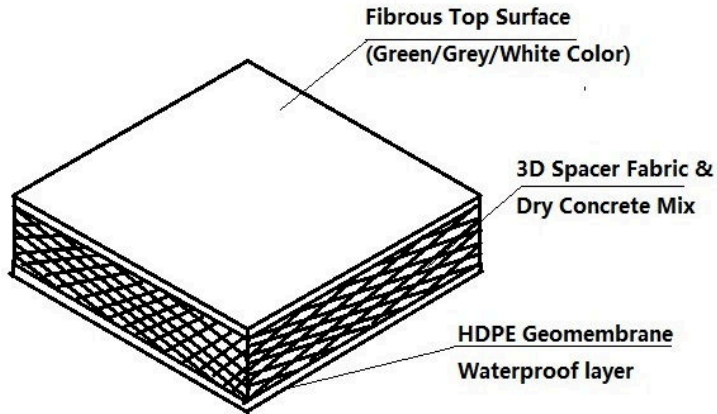
**Concrete Mat Cloth GCCM CMC8 set hard sample after adding water.**

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PIONEERTEX Concrete Mat Cloth (CMC) Structure Diagram



Date: 2017.1.1

Thickness: 5mm-13mm  
Weight: 8kgs/m<sup>2</sup>-18kgs/m<sup>2</sup>  
Packing: 2.1mX25mts/Roll.



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### What's the advantage of CMC GCCM?

#### **Rapid Install**

CMC can be laid at a rate of 150m<sup>2</sup>/hours, up to 10 times faster than conventional concrete solutions.

#### **Easy to Use**

CMC is available in man portable rolls for application with limited access such as 10mts long. It's also very easy to cut by "box cutter". The concrete inside of CMC is pre-mixed so there is no need for mixing or compacting.

#### **Lower Project Cost**

The speed and ease of installation mean CMC GCCM is more cost-effective than conventional concrete, with less logistical complexity.

#### **Eco-friendly**

CMC is a low mass, low carbon technology which uses up to 95% less material than conventional concrete for many applications.

#### **Long Expectation Life**

CMC is made of high strength geotextile and special cement mixture. Its expectation life can reach more than 30 years. What's more, it is of no need for maintenance.

#### **Water Proof**

The HDPE Geomembrane backing on the bottom surface of the CMC ensures that the CMC GCCM has excellent impermeability.

#### **Strong-High Strength**

The 3D mesh fabric reinforcement prevents CMC from cracking, absorbs energy from impacts. The HDPE geomembrane and geotextile will improve CMC composite strength after adding water.

#### **Durable**

CMC is twice as abrasion resistant as standard OPC Concrete, has excellent chemical resistance, good weathering performance and will not degrade in UV.

#### **Flexible and Soft**

CMC GCCM has good drape characteristics and will closely follow the ground profile and fit around existing infrastructure. Unset CMC can be cut or tailored by basic hand tools.

#### **Sealing Edge**

The cement powder inside of CMC will not come out from the edge because of special sealing edge.

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4 Rolls will be fixed on one pallet. 1X20'GP can stuff totally 40 Rolls.  
CMC GCCM can be rapidly unrolled to form a ditch or channel lining.



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**Rapid deployment of concrete on a roll**





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CMC GCCM can be used to protect slopes as a replacement for shotcrete and steel mesh. Its typically faster to install, more cost effective, requires less specialist plant equipment, and eliminate the risks associated with shotcrete rebound and debris.



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CMC GCCM provides a cost effective alternative for lining secondary containment bunds. It acts as an effective weed suppressant reducing maintenance cost as well as providing additional levels of impermeability and fire protection. Its ability to be installed quickly reduces time on site, whilst the availability of man-portable rolls allows for installation in areas with reduced access.



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CMC GCCM and Concrete Canvas comparison sheet was as below:

COMPARISON ITEM	TEST METHOD	PTT CMC	CCUK
			
PATENT NO.	N/A	201510200290.9.	
MATERIAL	N/A	POLYESTER+PP+PE+ +CONCRETE	POLYESTER +PVC+CONCRETE
STRUCTURE	N/A	WOVEN+NONWOVEN GEOTEX +CONCRETE	WARP KNITTED 3D FABRIC+CONCRETE
PROCESS	N/A	NEEDLE PUNCH+LAMINATION	3D PET FABRIC+COATING
THICKNESS	N/A	ANY THICKNESS OF 5MM-12MM	5MM,8MM,13MM
WIDTH	N/A	MAX.2.1MTS	1.0MTS
WEIGHT(UNSET)	N/A	1500KGS/M3	1900KGS/M3
DENSITY	N/A	1500KGS/M3	1900KGS/M3
BENDING STRENGTH	BS EN 12467	3.5-4.5 MPA	4-6MPA
COMPRESSIVE STRENGTH	ASTM C109-02	40MPA	40MPA
TENSILE STRENGTH (WIDE-WIDTH TENSILE)	ISO 10319 (ASTM D 4595)	35KN/M	7,9,20 KN/M
CBR PUNCTURE STRENGTH	EN ISO 12236	3.5KN	2.69KN
FREEZE-THAW RESISTANCE	BS EN12467:2004	PASS	PASS
SOAK DRY	BS EN12467:2004	PASS	PASS
WATER IMPERMEABILITY	BS EN12467:2004	PASS	PASS
FIRE RETARDANT	16 CFR PART 1633	PASS	PASS

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## PTT CHINA CMC GCCM Competitive Advantage (Against Concrete Canvas)

**A**

PTT concrete mat cloth has wider width. CMC width can be 2.1mts. It can reduce the joints to offer higher cost performance.

**B**

CMC has higher tensile strength and CBR puncture strength because of special woven geotextile reinforcement.

**C**

CMC thickness can be any between 5mm and 15mm, such as 10mm. It can be made to your order according to your project request.

**D**

PTT China has large production capacity for concrete mat cloth. Output: 1000-2000sqm/day. We can make quick delivery for your job.

**E**

PTT CMC color can be made to your order to offer more colorful and beautiful ground cover such as white, grey or green for your choose.

**PTT CHINA will offer special installation guide for clients.**

**Any the necessary fixings will be shipped together with CMC goods if customer need.**

CMC should be stored under cover in dry conditions away from directly sunlight and in manufacturer's sealed packaging.

It is not recommended to store in shipping containers in direct sunlight where temperatures may exceed 40 for prolonged periods. If stored correctly CMC has a shelf life of 24 months. If stored for longer it may remain usable in many instances.

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Container Stuffing quantity will be indicated in the quotation sheet in details.

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PTT CHINA CMC GCCM In Stock Before Packing



**CONTACT US:**

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