CONCRETE CANVAS®
Concrete Impregnated Fabric...

For further information or technical support contact:
+ 44 (0) 845 680 1908 | info@concretecanvas.com | www.concretecanvas.com

Concrete Canvas® GCCM Material Data

Concrete Canvas® GCCM Physical Properties*

Product	Thickness (mm)	Batch Roll Size (sqm)	Bulk Roll Size (sqm)	Roll Width (m)
CC5™	5	10	200	1.0
CC8™	8	5	125	1.1
CC13™	13	N/A	80	1.1

Product	Mass (unset) (kg/m²)	Density (unset) (kg/m³)	Density (set) (kg/m³)
CC5™	7	1500	+30-35%
CC8™	12	1500	+30-35%
CC13™	19	1500	+30-35%

Pre-Set Concrete Canvas® GCCM Properties

Setting

Working Time

1-2 hours subject to ambient temperature

CC will achieve 80% strength at 24 hours after hydration.

Method of Hydration

Spray the fibre surface with water until it feels wet to touch for several minutes after spraying.

Re-spray the CC again after 1 hour if:

- Installing CC5™
- Installing on a steep or vertical surface
- Installing in warm climates

Notes:

- CC cannot be over hydrated and an excess of water is always recommended.
- Minimum ratio of water:CC is 1:2 by weight.
- Do not jet high pressure water directly onto the matting as this may wash a channel in the material.
- CC can be hydrated using saline or non-saline water.
- CC will hydrate and set underwater.
- CC has a working time of 1-2 hours after hydration. Do not move the material once it has begun to set.
- Working time will be reduced in hot climates.
- CC will set hard in 24 hours but will continue to gain strength for years.
- If CC is not fully saturated, the set may be delayed and strength reduced. If the set is delayed, re-wet with a large excess of water.

Contact Concrete Canvas® Ltd.

Address
Unit 3, Block A22,
Trefforest Ind. Estate,
CF37 5SP, UK

Email: info@concretecanvas.com
Phone: +44 (0) 845 680 1908
Web: www.concretecanvas.com

Post Set Concrete Canvas® GCCM Properties

Based on Concrete Canvas GCCM ® hydrated in accordance with the Concrete Canvas® Hydration Guide.

Strength

Very high early strength is a fundamental characteristic of CC. Typical strengths and characteristics are as follows:

Compressive tests based on ASTM C109 – 02 (initial crack)
- 10 day compressive failure stress (MPa) 40

Bending tests based on BS EN 12467:2004 (initial crack)
- 10 day bending failure stress (MPa) 3.4
- 10 day bending Youngs modulus (MPa) 180

Tensile data (initial crack)

	Length direction (kN/m)	Width direction (kN/m)
CC5™	6.7	3.8
CC8™	8.6	6.6
CC13™	19.5	12.8

Reaction to Fire

CC has achieved **Euroclass B certification**:
BS EN 13501-1:2007+A1:2009 B-s1, d0

CC has achieved **MSHA approval:**
30 CFR, Part 7, Subchapter B, Section 7.24 Passed

Age Testing

Freeze-Thaw testing (ASTM C1185) 200 Cycles
Freeze-Thaw testing (BS EN 12467:2004 part 5.5.2) Passed
Soak-Dry testing (BS EN 12467:2004 part 5.5.5) Passed
Heat-Rain testing (BS EN 12467:2004 part 7.4.2) Passed
Water impermeability (BS EN 12467:2004 part 5.4.4) Passed**

Other

Abrasion Resistance (DIN 52108)
- Similar to twice that of OPC Max 0.10 g/cm²

Manning's Value (ASTM D6460) n = 0.011

Root Resistance (DD CEN/TS 14416:2005) Passed

Chemical Resistance (BS EN 14414)
- Acid (pH 4.0) (56 day immersion at 50°C) Passed
- Alkaline (pH 12.5) (56 day immersion at 50°C) Passed
- Hydrocarbon (56 day immersion at 50°C) Passed
- Sulfate Resistance (28 day immersion at pH 7.2) Passed

Impact Resistance of Pipeline Coatings
ASTM G13 (CC13™ only) Passed

Concrete Canvas® GCCM Patent Information

Patent Protected

* Occasionally there will be a Beam Fault (fabric imperfection under 100mm wide running across the width) in a Bulk Roll. This fault is unavoidable due to the manufacturing process and the fault will be clearly marked with a red tag, there will be a maximum of (1) one Beam Fault in any Bulk Roll. A joint may need to be made on site where there is a Beam Fault as the material at a fault will not reach the performance specified in this Data Sheet. The maximum un-useable material due to any Beam Fault will be 100mm. There are no beam faults in standard batched rolls.
* Indicative values

** For containment applications it is recommended to use Concrete Canvas® GCCM as a protective overlay in combination with an appropriate sealed membrane liner. Concrete Canvas® GCCM is not recommended as the sole barrier layer where impermeability is critical.

CE
Concrete Canvas Ltd.
CF37 5SP, United Kingdom
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EN12467:2004
Concrete Canvas:
Fibre cement sheet
NT
Oversize sheets
Class 1, Category A
Reaction to Fire B-s1,d0