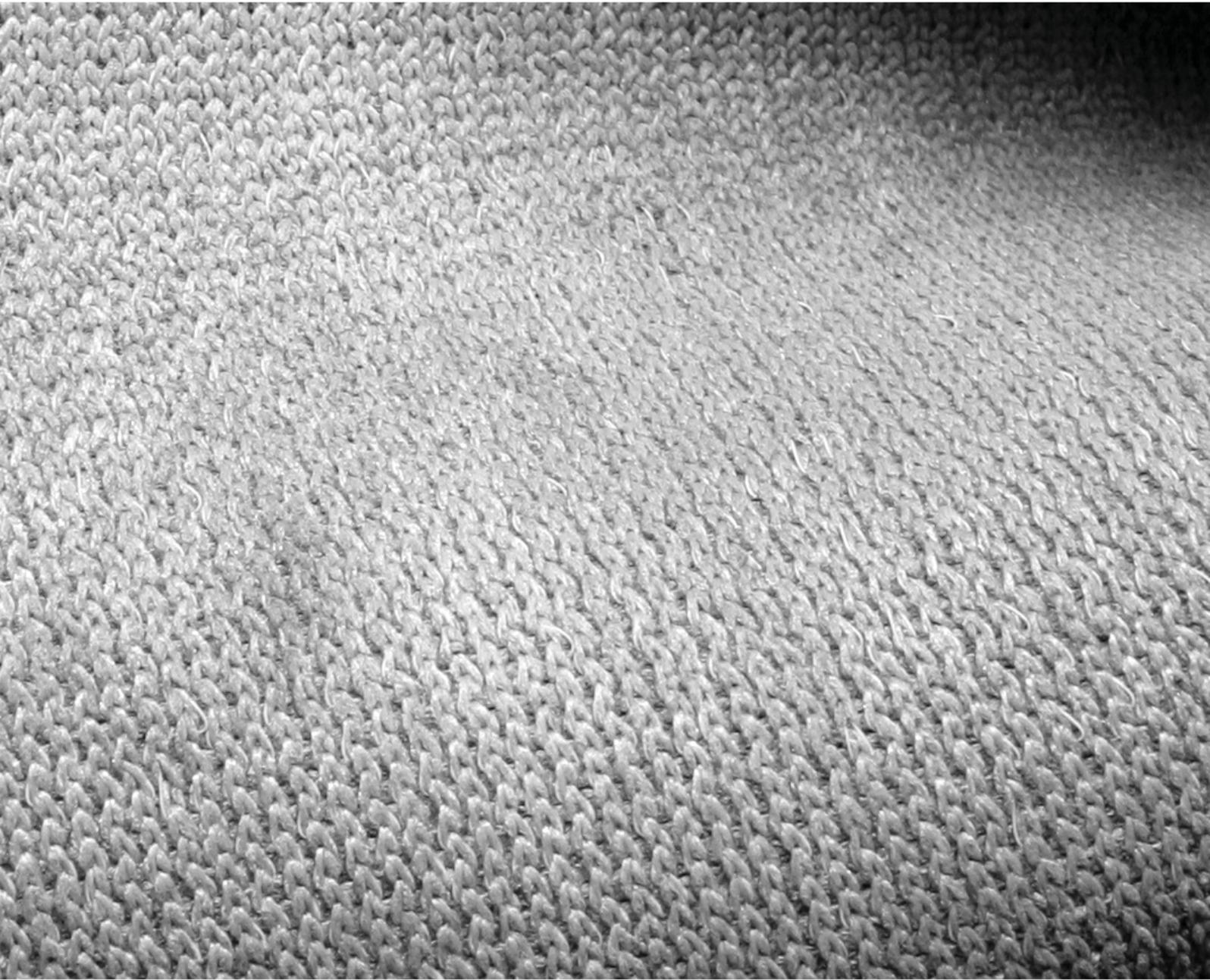


**CONCRETE
CANVAS™**

10.02 .UK



CONCRETE CLOTH™
JUST ADD WATER

www.concretecloth.co.uk

CONCRETE CLOTH™

Concrete Cloth™

Concrete Cloth (CC), is a flexible, cement impregnated fabric that hardens when hydrated to form a thin, durable, water and fire proof concrete layer.

CC allows concrete construction without the need for plant or mixing equipment. Simply position the Cloth and just add water.

CC consists of a 3-dimensional fibre matrix containing a specially formulated dry concrete mix. A PVC backing on one surface of the cloth ensures the material is completely water proof. The material can be hydrated either by spraying or by being fully immersed in water. Once set, the fibres reinforce the concrete, preventing crack propagation and providing a safe plastic failure mode.

CC is available in 3 thicknesses: CC4, CC8 and CC13, which are 5, 8 and 13mm thick respectively. Other widths and thicknesses are available upon request.

CC Key Facts

Easy To Use

CC is available in man portable rolls for applications with limited access or where heavy plant equipment is not available.

There is no need for mixing or measuring, the concrete is premixed and cannot be over hydrated. It will set underwater and in sea water.

Rapid

Once hydrated, CC remains workable for 2 hours and hardens to 80% strength within 24 hours. Accelerated or retarded formulations can be produced to meet specific customer requirements.

Flexible

CC has good drape characteristics allowing it to take up the shape of complex surfaces including those with a double curvature. The unset Cloth can be cut or tailored using basic hand tools.

Strong

The fibre reinforcement prevents cracking, absorbs energy from impacts and provides a stable failure mode.

Durable

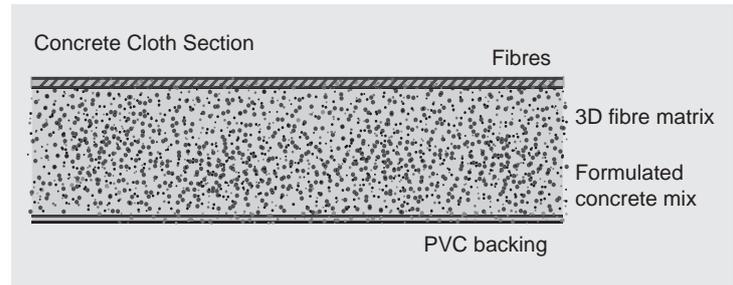
CC is chemically resistant, has good weathering performance and will not degrade in UV.

Water Proof

The PVC backing on one surface ensures that the material is completely water proof and chemically resistant.

Fire Proof

CC is a ceramic and will not burn.



CONCRETE CLOTH™

CC Applications

Ditch Lining



CC can be rapidly unrolled to form ditch or tank lining. It is significantly quicker and less expensive to install than conventional concrete ditch lining. It will conform to a range of ditch profiles and curves and requires no specialist plant equipment. Two men can line an 8m, 300mm V-ditch in 15 minutes.

Culverts



CC can be used as an effective and faster alternative to precast or cast-in-place concrete culverts.

Gabion Reinforcement



CC can also be used to upgrade or repair existing gabion structures to provide a durable solution that can last for decades.

Pipeline Protection



CC can be used as a coating for pipeline protection. CC can be wrapped around the pipe either as a cigar wrap or draped over and under the pipe to provide a superior tough rock shield. In remote areas it can be used to coat steel pipe on site without expensive wet concrete application plants.

Ground Surfacing



CC can be secured with ground anchors to rapidly create a concrete surface for flooring, pedestrian walk-ways or dust suppression.

Erosion Control



CC can be used in erosion control applications such as temporary and permanent slope protection, retaining walls, boulder fences, low level bunds and river bank and dam revetments.

CONCRETE CLOTH™

Other CC Applications

Other applications for CC include :

Roofing - Asbestos Covering - Water Tanks - Flood Defences - Shotcrete Replacement - Tunnel Lining - Building Cladding

If you have ideas for new applications for CC, please contact info@concretecanvas.co.uk



Concrete Cloth Material Properties

Strength / Hardness

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

Compressive testing based on ASTM C473 – 07

- 10 day compressive failure stress (MPa)	40
- 10 day compressive Youngs modulus (MPa)	1500

Bending tests based on BS EN 12467:2004

- 10 day bending failure stress (MPa)	3.4
- 10 day bending Youngs modulus (MPa)	180

Abrasion Resistance (ASTM C1353-8)

- CC lost 60% less weight than marble over 1000 cycles.

MOHS hardness 4-5

Method of Hydration

CC can be hydrated using saline or non saline water. The minimum ratio of water to CC is 1:2 by weight. CC cannot be over hydrated so an excess is recommended. The recommended methods are:

Immersion: Immerse CC in water for a minimum of 90 seconds.

Spraying: Spray the dry CC with water until it is saturated. Do not use a direct jet of pressurised water as this may wash a channel in the material and create a weakened area.

In a hot/arid environment, re-wet the material 2 - 4 hours after the initial hydration.

Physical Properties

Initial Set ≥ 120 min.
Final Set ≤ 240 min.

CC	Thickness (mm)	Roll Length (sqm)	Roll Width (m)
CC4	5	200	1.0
CC8	8	125	1.1
CC13	13	80	1.1

CC	Mass (unset) (kg/m ²)	Density (unset) (kg/m ³)	Density (set) (kg/m ³)
CC4	8.0	1500	+30-35%
CC8	12.0	1500	+30-35%
CC13	19.0	1500	+30-35%

MVTR

Moisture vapour transmission rate

PVC Thickness 0.42 mm
PVC MVTR range 0.836 - 0.924 g.mm / (m².day)

CC Static Head < 3000mm

Contact

Concrete Canvas Ltd. (UK)

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

Phone: +44 (0) 845 680 1908
E-mail: info@concretecanvas.co.uk

European Patent Application No 09001199
European Patent Application No 07732819.2
(Publication Number 2027319)

© Concrete Canvas Ltd 2010.