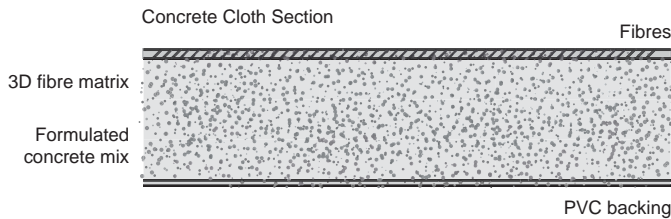


Concrete Cloth

Concrete Cloth (CC) is a proprietary material developed and manufactured by Concrete Canvas Ltd. 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 water proof. Hydrophilic fibres on the opposite surface aid hydration by drawing water into the cement.

When water is added the material remains flexible for 2 hours and then sets rapidly. It can be hydrated either by spraying with water or by immersion. Once set, the fibres reinforce the concrete preventing crack propagation and providing a safe plastic failure mode.



Applications

The unique properties of CC make it suitable for the most demanding applications where the following properties may be required:

- Rapid strength gain within six to twenty-four hours.
- Heat resistant for high temperature or fire proofing applications.
- Concretes subject to severe chemical attack such as agricultural environments, industrial applications and drainage systems.

Quality

Strict quality control of the raw materials in CC ensures the finished product is of the highest possible standard.

Method of Hydration

CC can be hydrated using saline or non saline water. The minimum ratio of water to CC is 1:3 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 concrete cloth 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.

Properties

CC	Thickness (mm)	Standard	
		Length (m)	Width (m)
CC4	4	300	1.0
CC8	8	110	1.1
CC13	13	72	1.1

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

Physical Properties

CC	Mass (unset) (kg/m ²)	Density (unset) (kg/m ³)	Density (set) (kg/m ³)
CC4	5.8	1500	+30-35%
CC8	12.0	1500	+30-35%
CC13	19.0	1500	+30-35%

Hydraulic Properties

Initial (minutes) Min 120/Max 360 Typical 230
 Final (minutes) Max Initial + 120 Typical 260

MVT Rate

PVC Thickness 0.42 mm
 PVC MVTR range 0.836 - 0.924 g.mm/(m².day)
 CC Static Head >3000mm