

HEALTH AND SAFETY



ROAD



RAIL



AGRO



OTHER



POWER



OIL & GAS



DESIGN



NATIONAL WINNER
National Winner
Chambers of Commerce
Award 2011



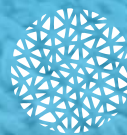
Top Innovation
BRE Insite 2011



2011 Expert's Choice Winner
Most Innovative Product



MTP Gold Medal Award
BUDMA 2011



Material ConneXion
MEDIUM AWARD
MATERIAL of the YEAR 2009
2009 Winner
Material ConneXion Medium Award
Material of the Year



2011 Nominee,
2007 Finalist
Design to Improve Life Award

1. Product and Company Identification

1.1 Product Name

Concrete Canvas TM

1.2 Description

A flexible mat containing a dry concrete mix trapped within a 3-dimensional fibre matrix with a fibrous surface on one side and a PVC membrane on the other. When water is added, the material remains workable for 2 hours and then hardens to form a concrete sheet. The material is supplied on a roll and comes in a range of thicknesses up to 20mm.

1.3 Supplier/Manufacturer

Concrete Canvas Ltd.

Unit 3, Block A22
Severn Road
Treforest Industrial Estate
Pontypridd
CF37 5SP, United Kingdom

1.4 Contact

Telephone (UK): 0845 680 1908
E-mail: info@concretcanvas.co.uk
Website: www.concretcanvas.co.uk

2. Composition/Information on Ingredients

2.1 Chemical Description

2.1.1 Cement

Substance obtained from calcium aluminate clinker. The major chemical elements are AL₂O₃, CaO, SiO₂, Fe₂O₃ appearing predominantly in the following mineralogical compounds:

- CaO·AL ₂ O ₃	- 4CaO·AL ₂ O ₃ ·Fe ₂ O ₃
- 12CaO·7AL ₂ O ₃	- 2CaO·SiO ₂

2.1.2 CAS Number

(Chemical Abstracts Service)
Calcium aluminates 65997-16-2

2.1.3 EINECS Number

(European Inventory of Existing Commercial Substances)
Calcium aluminates 266-045-5

2.1.4 Components contributing to the Hazard

Declaration and classification of components according to the Commission Directives of the European Communities 91/155/EEC and 93/21/EEC

	Classification	Hazard Labelling
Calcium Aluminates	None	None

Does not contain free lime or free crystalline silica (such as quartz, tridymite or cristobalite) in measurable amounts.

2.1.2 PVC Membrane

The principle constituent of the PVC membrane is not a hazardous substance.

2.1.3 Fibres

The principle constituents of the fibres are Polyethylene and Polypropylene yarns.

3. Hazards Identification

3.1 Most Important Hazards

In contact with water, an alkaline solution occurs (pH 11-11.5). In spite of the pH level, the alkaline reserve is limited and the product has not been classified as an irritant according to criteria defined in the EEC directives (93/21/EEC). A dust problem may occur in confined areas. It is regarded as a nuisance without any known specific effects to health.

3.2 Specific Hazards

The concrete mix reacts chemically and hardens when mixed with water. The reaction is exothermic resulting in a temperature rise. In large quantities the temperature may increase enough to cause a risk of burns.

4. First Aid Measures

4.1 Eye Contact

Flush eyes with plenty of clean water. If symptoms persist, seek medical attention.

4.2 Skin Contact

Remove contaminated clothing and wash affected area with soap and water.

4.3 Ingestion

Do not induce vomiting. Wash out mouth with water and give patient plenty of water to drink.

4.4 Inhalation

If irritation occurs, move to fresh air. If nose or airways become inflamed, seek medical advice.

5. Fire Fighting Measures

5.1 Flammability

The product is not flammable and will not support flame. It does not promote combustion with other materials.

5.2 Extinguishing Media

No specific recommendations or restrictions.

6. Accidental Release Measures

6.1 Personal Precautions

See 8.3

6.2 Cleaning Up

Recover the spillage in a dry state if possible. Minimise generation of airborne dust. The product can be slurried by the addition of water but will subsequently set as a hard material. Keep children away from clean up operation.

7. Storage and Handling

7.1 Storage

The material should be stored in an environment that is water proof, clean and protected from contamination, dry (internal condensation minimised). Packed products must be stored in unopened bags, clear of the ground in cool, dry conditions and protected from excessive draught.

7.2 Handling

No particular precautions.

7.3 Incompatible Products

Contact with water or water vapour during storage will hydrate the product and affect it's performance.

7.4 Packaging Materials

No special restrictions with respect to safety.

8. Exposure Controls/Personal Protection

8.1 Engineering Measures

Where reasonably practical, dust exposures should be controlled by engineering methods.

8.2 Control Parameters

Generally, the operational exposure limits defined for specified nuisance dust are applicable:

	8h Time Weighted Average (TWA)
Total Dust	10mg/m ³ Average (TWA)
Respirable Dust	5mg/m ³ Average (TWA)

8.3 Personal Protective Equipment

a) **Respiratory protection** – suitable respiratory protection should be worn when the conditions are such that the personal exposure is estimated to approach or exceed the stated limits.

b) **Hand and skin protection** – protective clothing should be worn which ensures that cement, or any cement/water mixture, e.g. concrete, does not come into contact with the skin.

c) **Eye protection** – dust-proof goggles should be worn wherever there is a risk of cement powder or any cement/water mixture entering the eye.

9. Ecological Information

After hydration (a few hours or days in moist conditions) the product is stable in soil and in water, with negligible mobility of its constituents.

10. Physical / Chemical Properties

10.1 Physical Data

Physical state	Canvas / Particulate
Mean particle size	5-30 microns
Odour	(N/A)
pH of wet cement	11-11.5 (10% in water)
Viscosity	(N/A)
Freezing point	(N/A)
Boiling point	(N/A)
Melting point	(N/A)
Flash point	(N/A) [non flammable]
Explosive properties	(N/A) [non explosive]
Density	1500 kg/m ³
Solubility	(N/A)

11. Stability and Reactivity

In a dry environment the product is chemically stable. When mixed with water it reacts chemically and hardens, forming stable calcium aluminate hydrates. This reaction is exothermic and continues for up to 24h. Total heat released is < than 500J/kg. There are no hazardous decomposition products.

12. Toxicological Information

12.1 Acute Toxicity

None

12.2 Local Effects

May cause local irritation to the eye, throat or skin but is not classified as an irritant according to EEC legislation.

12.2 Sensitization & Chronic Toxicity

Does not contain measurable amounts of soluble Chromium (VI).

13. Disposal Considerations

Dispose of empty packaging or surplus Concrete Canvas to a place authorised to accept builders' waste. Keep out of the reach of children.

14. Transport Information

Not classified as hazardous according to international transport regulations.

15. Regulatory Information

15.1 Hazard and Safety Label

Cement classification according to European Commission Directive 93/21/EEC of 27 April 1993:

Classification	None*
Symbol	None
R - Phrases	None
S - Phrases	None

* Not classified as a dangerous material