

MatCrete Datasheet

October 2017

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An enhanced fibre-cement blend to be mixed with a solution of FlexBond (a liquid additive), for the saturation and impregnation of CemForce and CemLam forming a reinforced, vapour-proof product of about 4 to 8 mm in thickness.

Technical Data

Type	Fibre reinforced blend
Colour	See website www.cemcrete.co.za
Pot life	45 minutes
Working time	30 minutes
Initial set	1 hour
Mixing water temperature	8°C-25°C
Application temperature (ambient)	8°C-25°C
Substrate temperature	8°C-25°C
Minimum application thickness	2mm including CemForce
Maximum application thickness	2mm for every layer of CemForce
Density	1.6kg/litre
Protection during application	Sun and wind barriers

Purpose

For creating a thin, reinforced, waterproof cement lining to be applied directly onto hard compacted soil, the inner surface of old, cracked reservoirs etc. For the cost-effective creation of any water-containing structure.

CemForce

An open-textured reinforcing 4x4mm mesh fabric, made of polypropylene strands and fibres. Designed for use with cement matrices. Is totally inert to the alkalinity of cement and has an extended fibrous interface area with which the cement matrix can interact and mechanically bond.

CemLam

A tightly woven polypropylene tape with a 4mm x 4mm mesh fabric made of polypropylene strands and fibres, laminated by hot extrusion to form a tough, waterproof substrate. It is totally resistant to the alkalinity of cement and offers extended fibrous interface on the strands with which the cement matrix can mechanically bond. The cement matrix is specially formulated to form part of the CemLam to act like fibreglass and resin.

The CemLam incorporates a seam for joining CemLam strips together.

- Use only on surfaces that are sound, clean, and completely dry. Avoid application in direct sunlight to minimize premature drying.

Type

MatCrete	Ready to use with the addition of FlexBond solution only
CemForce	Woven polypropylene fibre
CemLam	Woven polypropylene fibre extrusion laminate

Cemcrete provides a comprehensive technical service based on over 3 decades of experience in the field of surface applications and cement technology. Cemcrete believes, to the best of its knowledge, that the information contained herein is true and accurate at the date of issuance and is subject to change without prior notice. For further clarification of these instructions, contact Cemcrete.

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Application

The creation of fish ponds, water channels, dams, drinking troughs, relining of pipes, repair of old cracked reservoirs, flat roof waterproofing, parapet waterproofing etc.

Advantages

Thin cement linings can now be formed in-situ with the help of the reinforcing of as many layers of CemForce as is necessary for any given strength required. Not only waterproof, but vapour proof as well. Every layer of CemForce applied can withstand 1 meter of positive water pressure.

Limitations

Will not stick to plastic, rubber or gypsum plaster. Do not use if freezing conditions are expected within 24 hours. Could use a two-pack epoxy to bond and seal between cured **MatCrete** and other materials.

Site Work

Storage

MatCrete: Keep bags off the floor on slats in a dry place. Expected shelf life under dry conditions is 6 months after date of invoice.

FlexBond: Store in a dry shed protected from freezing for 12 months from date of invoice. Stir well from the bottom if storage is prolonged.

CemForce and CemLam: prolonged storage in sunlight to be avoided.

Weather

Protect work from rain for 12 hours and frost for 24 hours.

Surface Preparation

The ground over which material is to be used should be well compacted and in most cases a 100mm layer to be a soil/cement mixture of about 1 volume cement, 9 volumes soil, well compacted and damped with water.

Mixing

Dilute one volume FlexBond with four volumes clean water and use this solution to mix **MatCrete** until you achieve a sloppy plaster consistency.

Application (1)

Lay out the first layer of CemLam, plastic facing down, over well compacted soil. Apply a liberal coat of **MatCrete**/FlexBond mixture over woven side about 200mm wide over all joints and laps. If there is no seam or it has been cut off apply 200mm wide CemForce strips into the wet **MatCrete** along the joint lines as additional reinforcing in the areas and work material into fibres. Now liberally coat the rest of the CemLam and lay a sheet of CemForce into the wet **MatCrete**, but in a perpendicular direction to the CemLam runs. Overcoat this with **MatCrete**/FlexBond mixture making sure that the CemForce is fully saturated and covered. If extra strength is required, more layers of CemForce can be applied in the same manner. All work to receive a final coat of **MatCrete**/FlexBond mixture.

Tip: Measure out all material before application starts.

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Application (2)

When applying the **MatCrete** system to existing structures, omit the CemLam and use two layers of CemForce laying them perpendicular to each other. Apply a liberal coat of **MatCrete** slurry to the structure into which the first layer of **MatCrete** is imbedded. Then complete the application process as above.

Curing

Allow finished work to air cure for three days before filling with water.

Coverage

FlexBond	Approx. 2 litres per 40kg bag of MatCrete
MatCrete	Approx. 6m ² per 40kg bag depending on thickness of final work
CemForce	Allow 10% for overlaps and joints
CemLam	Need not allow for joints, but allow narrow 200mm strips of CemForce for the joints

Packaging

FlexBond	1 litre, 5 litre and 20 litre plastic drums
MatCrete	40kg bags
CemForce	1m width; any length
CemLam	1,6m widths any length

Manufacturer's Warranty

Cemcrete warrants that the products manufactured by it shall be free from material defects and will be consistent with its normal high quality. Should any of the products be proven defective, the liability to Cemcrete shall be limited to replacement of the product ex-factory. Cemcrete makes no warranty as to merchantability or fitness for a particular purpose and this warranty is in lieu of all other warranties expressed or implied. The user shall determine the suitability of the product for his intended use and assume all risks and liability in connection therewith.

Note:

If fish or plant life is to be put back into the pond, the water should be circulated through the necessary filters and UV lights for at least 7 to 10 days. Once this has been done, the water should be tested before fish or plants are introduced back into the water.