



## CEMtobent CS Plus

### Product Information Page

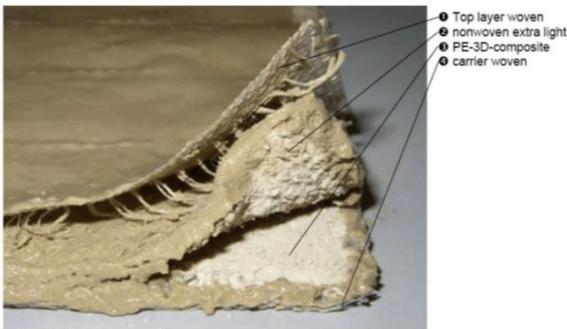
CEMtobent CS Plus is a sodium-bentonite based waterproofing membrane, which is radon and root resistant; it is specially designed for use on vertical and horizontal applications on below ground reinforced concrete structures.

CEMtobent CS Plus consists of a high quality woven clay liner, a transparent polyethylene honeycomb liner where the sodium bentonite powder is held, a rain protection fleece and a strong black polyethylene coated high quality woven clay liner, which are mechanically stitched together to form a strong composite.

CEMtobent CS Plus is used for waterproofing of all basement grades according to BS8102:2009.

#### Specification Tip for Design Professionals:

CEMtobent CS Plus may be specified by name or by using the following description: *a propriety waterproofing membrane, which is radon tight and root resistant, consisting of a high quality woven clay liner, a transparent 3D composite liner with a unique cell structure, which encapsulates the sodium bentonite powder and a strong black polyethylene coated high quality woven clay liner, which are mechanically stitched together to form a strong composite.*



- ✓ Tough and resistant
- ✓ Seals small cracks in the concrete
- ✓ Demonstrates self-healing properties
- ✓ Higher puncture and tear resistance compared to conventional foils and coating
- ✓ Quick and easy to install without complicated welding equipment
- ✓ High compound shear strength
- ✓ The reinforcement fibre structure and thermally bonded cover layer form a tight composite
- ✓ Can be installed in every season independently of temperature and weather conditions
- ✓ Quality control tests to ensure consistent high quality
- ✓ May be installed pre or post-form

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### How does CEMtobent CS Plus work:

Penetrating water causes the sodium bentonite in the membrane to hydrate and swell, producing an impermeable membrane, which is self healing, and is capable of sealing any small cracks in the concrete.

### How do I prepare the surface:

The substrate onto which CEMtobent CS Plus is to be placed should be sound, well compacted and without voids or deflections which are greater than 20mm.

### How do I install CEMtobent CSPlus:

CEMtobent CSPlus should be placed on a properly prepared flat surface, with the open-side facing the concrete to be waterproofed. The edges of the membrane should be overlapped by 150mm and the ends of the rolls staggered by 300mm, the overlaps should be detailed using CEMstar Adhesive. The minimum thickness of the reinforced concrete used should be 150mm. Backfilling should be clean, well graded and compacted every 300mm. It should be free from construction debris



### Packaging:

12m<sup>2</sup> rolls (1.2mx10m)

54m<sup>2</sup> rolls (1.8mx30m)

### How do I store CEMtobent CS Plus:

CEMtobent CS Plus should be stored off the ground in dry conditions.

**For additional information, practical presentations or independent test reports on CEMtobent CS Plus please contact our Technical Department.**

**Please protect the environment: Dispose of waste in accordance with the local authority regulations.**

**Disclaimer:** The general information provided in the present technical description, application guidelines and other recommendations, is based on research and experience. However, the client is obliged to determine themselves what products are suitable for use. Accordingly, no liability will be accepted by IBC Limited t/a SURFASOLOGY™.

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TECHNICAL DATA:	Test method (based on)	Unit	Value
Mass per unit area, total	DIN EN 965	g/m <sup>2</sup>	≈5,500
Mass per unit area, non-woven extra light (PP white, filled with bentonite)	DIN EN 965	g/m <sup>2</sup>	60
Mass per unit area, honeycomb (PE-3-D Composite, filled with bentonite)	DIN EN 965	g/m <sup>2</sup>	70
Mass per unit area, bentonite layer (sodium bentonite, powder)	DIN EN 965	g/m <sup>2</sup>	5,000
Mass per unit area, carrier woven (PP-slit film woven, beige)	DIN EN 965	g/m <sup>2</sup>	120
Mass per unit area, top layer woven (PE-coated woven, black)	DIN EN 965	g/m <sup>2</sup>	200
Thickness, total	DIN EN 964-1	Mm	≥8
Max. tensile strength, md/cmd*	DIN EN ISO 10319; ASTM-D-4595	kN/m	2x10 <sup>-15</sup>
k-value	DIN EN ISO 18130; ASTM-D-5887	m/s	2x10 <sup>-15</sup>
Roll dimensions, width x length	-	mxm	1.80 x 30 3.60 x 30

\*md = machine direction, cmd = cross machine direction

BENTONITE PROPERTIES, SODIUM BENTONATE	Test method (based on)	Unit	Value		Test method (based on)	Unit	Value
Montmorillonite content	XRD	%	≥70	Water absorption	DIN 18132 (24hrs)	%	≥500
Methylene blue consumption	Methylene blue test, VDG P 69	Mg/g	≥200	Swell index	ASTM-D-5890	ml/2g	≥20
Water content	DIN 18121 (5hrs, 105°C)	%	≤15	Fluid Loss	ASTM-D-5891	ml	<20

### Test Reports:

- Radon Test Report E-81/08
- German Standards DIN EN 965, 964-1, DIN 18121, DIN 18132
- Independent Test on Product's Performance –Brendebach Ingenieure GmbH (Structural Engineers)
- CE MarkingDIN EN 13491

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**For further information contact the SURFASOLOGY™ Technical Department.**

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