



DUROBENTONITE 100

A MULTIPLE COMPONENT SHEET MEMBRANE WATERPROOFING SYSTEM.

PRODUCT INFORMATION

Description

Durobentonite 100 is a multi-layer sheet membrane waterproofing system. It consists of a self-sealing, expandable layer of bentonite laminated at the rate of approximately 4.8Kg per square metre to an impermeable, high density polyethylene (HDPE). The third component is a protective layer of spun polypropylene. Together, these three components form a tough, high performance waterproofing membrane manufactured in controlled thicknesses of 4.25mm to 5mm, specially designed for blindside installations such as lagging, under floor and elevator pits. Durobentonite 100 also withstands applications where shotcrete is blown directly into the face of the membrane.



Key Benefits Summary

- ♦ Multi-layer waterproofing system
- ♦ Long life HDPE
- ♦ Installation made easy
- ♦ Suitable for use with shotcrete



USE AREA

- ♦ Durobentonite 100 is especially effective when waterproofing from the blindside (lagging etc.) where the waterproofing membrane is applied before the walls or floor are poured. It is designed to resist damage from multiple exposure to inclement weather, extremely abrasive concrete pours or direct installation of shotcrete. Durobentonite 100 will also exhibit outstanding protection against water intrusion in areas of high water heads. Its special weather treatment allows Durobentonite 100 to be installed for relatively long periods of time before the walls are poured.



PACKAGING

- ♦ 7 x 1.2m Rolls

NOTE: This specification data is not complete. Use installation guidelines from the specification manual for detailed information.

TECHNICAL INFORMATION

Physical properties	Value	Test Method
Pliability: 180 bend over 2 5 mm mandral@ -3°C	10,000	ASTM D146
Tensile Strength: membrane (PSI) ASTM D412		4,000PSI
Resistance to microorganisms (bacteria, fungi, mold, yeast)	unaffected	
Elongation - ultimate failure of membrane	700%	D638 Type 4 Dumbell
Puncture Resistance	76.8Kg	FTMS 101B
Resistance to Hydrostatic Head (m of water)	46m	ASTMD751 Method A Footnote #4
Resistance to water migration under membrane:zero leakage	46m/head	Footnote #1
Water migration at or through joint	Instant Seal/ no penetration	Footnote #5
Perm rating ASTM E96	0.03	
Permeance co-efficient of permeability	2.7x10-13cm ³ / cm ² /sec	Footnote #4
Cycling over 38mm joint	No deterioration	Footnote #2
Cycling over 6.3mm crack 250 cyc.	no deterioration	Footnote #3
Installation temperatures	-27.5°C to 50°C	

Non Toxic: Do not ingest

Freeze/thaw cycles: No effect before or after installation
Non Staining

Resistance to chemicals and gases: Extremely high resistance -contact manufacturer for specific information.

Life Expectancy: Both high density polyethylene and bentonite have life expectancy measurable in the thousands-of-years.

FOOTNOTES FOR TECHNICAL DATA :

1. A 2.5cm diameter hole was cut in the middle of a 8.8cm diameter sample of Durobentonite 100. Sample clamped in 7.5cm diameter permeameter, 46m waterhead applies.
2. Membrane placed between 2 clamps 3.8cm apart. Temperature reduced to -27.5°C and clamps are pulled apart to 6.5cm. Cycle repeated between 3.8cm and 6.3cm - 2000 times.
3. Membrane placed between 2 butting clamps. Clamps spread at -27.5°C. Cycle repeated 250 times.
4. Membrane applied to porous stone and placed in permeameter. Pressure increase to equivalent of 46m water head.
5. Test same as #4 only performed at joint.
6. Above values on 20 mil HDPE system.

INSTALLATION

For complete details, refer to the appropriate Durobentonite 100 installation manual. All blindside installations have the bentonite side facing the installer.

Preparatory Work :

- ♦ Examine all surfaces prior to starting application. All spaces between lagging larger than 25mm shall be covered with 6mm plywood prior to installation.

Lagging

- ♦ Durobentonite 100 may be installed in a vertical or horizontal direction. Lap joints 75mm shingle fashion (top over bottom) when pouring against, 150mm shingle fashion (bottom over top) when shotcreting against. Trowel Paramastic, Duroproof nep black ECO around all tiebacks and penetrations. Protect from flooding prior to concrete pour.

Earth

- ♦ Durobentonite 100 may be used to cover earth design cuts which are to serve as the external side of a vertical wall form. Overlap joints 100mm to 150mm depending on regularity of soil cut.

Under Floor :

- ♦ Durobentonite 100 is installed whenever direct contact of the bentonite and floor slab are desired. Durobentonite 100 will form an instant seal to floor area. Overlap joints 75mm. May be installed over consolidated earth, sand or mud slab. To establish a moisture vapour protective barrier beneath the floor, all seams are sealed with Durotech Seam Tape.

Buried Form :

- ♦ Durobentonite 100 may be directly attached to forms which are to be left in the earth after the concrete is poured (i.e. elevator pits, sumps, etc.) Overlap joints min 75mm.

Penetrations :

- ♦ Tiebacks, tie bolts, misaligned soldier piles, whalers and bracking may all penetrate the Durobentonite 100 membrane. Should this occur, contact your Durotech representative.

Protection :

- ♦ The Durobentonite 100 dual waterproofing system has a PUNCTURE RESISTANCE of 76.8Kg. and does not require an additional protection course for most applications. For special applications, please contact your Durotech representative for details.

STORAGE

Protect from moisture. Store on skid or pallet, cover with polyethelene or tarp. Do not double stack pallets.

HEALTH & SAFETY PRECAUTIONS

The Material Safety Data Sheet (MSDS) must be read and understood prior to use.

TECHNICAL SERVICE

Durobentonite 100 has a team of qualified Technical Sales Representatives who provide assistance in the selection and specification of products. For more detailed information or service and advice call on (02) 96031177

GUARANTEE / WARRANTY

Durotech products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with Durotech written instructions and (b) in any application recommended by Durotech, but which is proved to be defective, will be replaced free of charge.

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