



# BLOCK X750 HDPE

## Below Grade, Pre-Applied Fully Bonded HDPE Waterproofing Membrane

### SMART ADVANTAGES

- Forms a integral bond to poured concrete by pressure sensitive adhesive
- Easy roll/kick out installation- reduces installation time and cost.
- Simple and quick to install- requires no primers.
- Ready for immediate placing of reinforcement.
- Unaffected by freeze/thaw, wet/dry cycling.

### DESCRIPTION

BLOCK X750 HDPE membranes are Preformed HDPE fully bonded membrane comprised of a thick HDPE film, pressure sensitive adhesive and weather resistant protective coating. These membranes bond with wet concrete cast on the membranes, to form an excellent sealing which effectively stops lateral water migration. Thus it prevents ingress of water into the structure and tracking of water between membrane and structure. Reinforcement can be directly laid on top of membrane.

### FEATURES & BENEFITS

- Forms a unique continuous adhesive bond to concrete poured against it - prevent water migration and make it unaffected by any substrate settlement beneath the slabs.
- Provides barrier to water, moisture and gas - physically isolates the structure from the surrounding ground.
- Can be applied to permanent form work- allows maximum use of confined sites.
- Unaffected by wet conditions – cannot activate prematurely. Inherently waterproof, non-reactive system.
- Chemical resistant-effective in most types of soils and waters, protects structure from salt or sulphate attack.
- Excellent bonding with concrete applied on membrane, to protect concrete effectively for the design life of the structure.
- Low flatness requirement to substrate: reliable overlapping: fast and easy application without requiring use of welding.
- 75/100mm overlaps ensure effective water-tight joints once overlaid with concrete over burden.
- Good puncture resistance.

### AREAS OF APPLICATION

- Basements
- Subways, underground metro projects.
- Retaining walls for confined area.
- Cut and cover tunnels.
- Caverns.
- Other underground civil structures.

### TECHNICAL CHARACTERISTICS

PROPERTIES	VALUES	TEST STANDARDS
Color	White/Off white	
Basic film Thickness	>0.7 mm >0.9 mm	ASTM D 5147
Composite membrane Thickness	1.2 mm 1.5 mm	ASTM D 5147
Tensile Strength	>25 MPa	ASTM D 412
Elongation at break	>500%	ASTM D 412
Low Temperature Flexibility	-25°C Pass	ASTM D 1970
Puncture Resistance	>900 N	ASTM E 154
Peel Adhesion with concrete	>1400 N/m	ASTM D 903
Lap Peel Adhesion Strength	>1400 N/m	ASTM D 1876
Resistance to Hydrostatic Head	Pass (7 bars)	ASTM D 5385
UV Exposure Limit	>21 Days	-
Overlap Width	75/100mm	-

Tolerance: Typically  $\pm 10\%$  from the above values. All parameters are obtained under controlled lab conditions.

### APPLICATION INSTRUCTIONS

- Surface Preparation: The substrates shall be sound and solid to prevent any movement when concrete is poured. Substrates shall be regular and smooth with no gaps or voids greater than 0.5" (12 mm).

- Horizontal- The substrate must be free of loose aggregate and sharp protrusions. Avoid curved or rounded substrates. When installing over earth or crushed stone. Ensure substrate is well compacted to avoid displacement of substrate due to concrete pour.
- Any standing water on the substrate must be removed.
- Vertical- Use concrete, plywood to ensure smooth level and support to the membrane. Supporting board systems must be close butted to provide support and should be not more than 0.5" (12mm) out of alignment.

## INSTALLATION

BLOCK X750 HDPE membranes can be applied at temperature of -25° C to 60°C. When installing BLOCK X750 HDPE product in cold or marginal weather conditions the selvedge and tape adhesive can be gently warmed using a hot air gun or similar to remove moisture or condensation and improve initial adhesion.

## HORIZONTAL SUBSTRATES

Place the membrane HDPE film side to the substrate with adhesive/coated side facing up towards the concrete pour. End laps should be staggered to avoid a build-up of layers. Leave plastic release liner in position until overlap procedure is completed. Accurately position succeeding sheets to overlap the previous sheet with the overlap of selvedge. Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap. Peel back the plastic release liner from between the overlaps as the two layers are bonded together. Ensure a continuous bond is achieved without creases and roll firmly with a heavy roller. For end laps or at cut joints, use a suitable tape with appropriate width to ensure proper overlaps.

## VERTICAL SUBSTRATES

Vertically fasten the membrane mechanically using HDPE roundels (fasteners) appropriate to the substrate with the adhesive/coated side facing towards the concrete pour. The membrane may be installed in any convenient length. Secure the top of the membrane using a termination bar by fixing 50 mm below the top edge of the concrete pour.

Roundels can be on the selvedge so that the membrane lays flat and allows firm rolling of the overlaps. The membrane shall be fused onto the roundels by thermo-fusing the rear side (HDPE) of the membrane onto the roundels by hot air welding. Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap. Roll firmly to ensure a watertight seal. Roll ends and Cut edge. Overlap all roll ends and cut edges with appropriate area and ensure the area is clean and free from contamination.

## CORNERS

Internal and external corners should be pre-formed as per manufacturer instruction, including overlapping of the membrane with appropriate area and sealing with single sided sanded tapes. Ensure that the apex of the corner is covered and sealed with tape and roll firmly.

## PACKING

Width available in 1.2M, 1.5M and 2M  
Roll length: 20m  
Sizes available on order and availability.

## SHELF LIFE

Shelf life is up to 12 months from the date of manufacturing if stored below 25 °C. in unopened, stored under cover, protected from direct sunlight and high temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.

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