

BONDPROOF PRE

A Unique, Prefabricated, Pre-Applied Fully Bonded HDPE Waterproofing Membrane



PRODUCT DESCRIPTION

BondProof Pre is a thick High density polyethylene membrane is a multi-layer composite waterproofing material with super performance, including a layer of high-density PE (HDPE) film, self-adhesive polymer layer and a unique particulate layer. Unlike conventional membranes, this forms a bond with the wet concrete poured over it and becomes monolithic part of the structure. This prevents water ingress tracking between the unbonded membrane and structure.

ADVANTAGES

- Continuous adhesive bond to poured concrete
- Unaffected by ground settlement
- Provides a barrier to water, moisture and gas
- Ready for placement of reinforcement bars
- Excellent chemical resistant to soil types
- Resistant to acids and alkali

APPLICATIONS

- Economical waterproofing solution for low-risk basements and other less critical structures below ground
- Basements, Confined Retaining walls
- Subways
- Tunnel
- Cave
- Other underground public constructions

APPLICATION METHOD

SURFACE PREPARATION

ALL SURFACES

It is essential to create a sound and solid substrate to eliminate movement during the concrete pour. Substrates must be regular and smooth with no gaps or voids greater than 12mm.

HORIZONTAL

The substrate must be free of loose aggregate, voids and sharp protrusions. Avoid curved or rounded substrates. Ensure substrate is well compacted to avoid displacement of substrate due to concrete pour. The surface does not need to be dry, but standing water must be removed.

VERTICAL

Use concrete, plywood, insulation or other approved facing to sheet piling to provide support for the membrane. Board systems such as timber lagging must be close butted to provide support and not more than 12mm out of alignment.

MEMBRANE INSTALLATION

When placing BondProof Pre, overlap the bonding edge. Use a steel roller to press the bonding edge firmly to ensure complete bonding and to achieve continuity. BondProof Pre can be applied at +5°C to +40 °C. C.

HORIZONTAL APPLICATION

Place and kick out 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 buildup of layers. Leave the plastic release liner in position until the overlap procedure is completed. Accurately position succeeding sheets to overlap the previous sheet 75mm along the marked 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. Any initial tack will quickly disappear. For end laps or at cut joints, use tape with appropriate width to ensure proper overlaps.

VERTICAL APPLICATION

Vertically fasten the membrane mechanically using tape or mechanically fasten the membrane vertically using low head fixings (i.e., fasteners or roundels) 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 50mm below the top edge of the concrete pour. Fixings shall be made on the selvedge so that the membrane lays flat and allows firm rolling of the overlaps. The areas where roundels are used, the membranes 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 EDGES

Overlap all roll ends, corners and cut edges by a minimum 75mm and ensure the area is clean and free from contamination, wipe with a damp cloth if necessary. Remove loose particulates from the surface of the BondProof Pre lower part of lap by brush and scraper, use a hot air gun to remove particulates and adhesive from the overlap area when using the tape. Apply tape by peeling off release liner and fix one adhesive side onto the lower part of lap where sand and adhesive have been removed. Roll firmly to ensure complete adhesion without creases or voids. Peel off the other layer of release liner and apply the upper part of BondProof Pre lap onto the tape. Roll firmly to ensure complete adhesion.

CORNERS

Internal and external corners should be pre-formed including overlapping of the membrane with appropriate overlap and sealed with tape. Ensure that the apex of the corner is covered and sealed with tape and rolled firmly

POURING OF CONCRETE

The concrete shall be poured after thorough inspection of membrane installation and placement of reinforcing steel. During pouring, take care when vibrating concrete to avoid damaging the waterproofing membrane.

TECHNICAL DATA

PROPERTY	RESULTS
Color	White/ Off-white
Elongation at Break	>500 %
Tensile Strength	>25 MPa
Thickness (Composite)	1.2 mm
Puncture Resistance	>800 N
Peel Adhesion to Concrete	>1200 N/m
Lap peel adhesion (Welded Joints)	>880 N/m
Resistance to Hydrostatic Head	>71 m
Low Temperature Flexibility	-25°C, Pass

TEMPERATURE REQUIREMENT

- BondProof Pre can be applied at temperatures of +5°C to +40°C.
- BondProof Pre is designed for substrate temperatures of -25°C to +40°C.

PACKING

Thickness – 1.2 mm

Packaging – 1.2 x 20 mtr Roll

STORAGE

- Store in dry conditions between 5°C to 40°C and in a cool, shaded and dry place.
- Store off ground under tarps or otherwise protect from rain and ground moisture.

SHELF LIFE

Observe 12 months shelf life and use on a first in, first out basis, if stored as per recommendations in a covered and secured storage space.

SAFETY MEASURES

Wear hand gloves, safety shoes and safety goggles while using and handling the product. In case, eyes or mouth are affected wash with plenty of water and seek medical help immediately.

Before use, refer to the product label and Material Safety Data Sheet (MSDS) for each system component. All users should acquaint themselves with this information prior to working with the products and follow the precautionary statements. MSDSs can be obtained by contacting our representative.

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