

PRODUCT CODE 5670

SMARTCARE PREAPPLY HDPE 80

High Density Polyethylene Membrane For Pre-Application



PRODUCT DESCRIPTION

SmartCare PreApply HDPE 80 is a thick High density polyethylene membrane is a multi-layer composite waterproofing material with superior performance, including a layer of high-performance PE 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.

AREAS OF APPLICATION

- Basement
- Tunnel
- Other underground public construction
- Subway
- Cave

CHARACTERISTICS/ 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 acid and alkali

PRODUCT DATA

Chemical Properties:

Membrane made of High Density Polyethylene material and pressure sensitized adhesive. Protective coating and release liner is applied above this.

Physical Properties:

Colour: White
 Dimensions: 1.5mm thickness, 1.2m width, 20m length,
 1.5mm thickness, 2m width, 20m length – Dual side HDPE



TECHNICAL DATA

Property	Typical Value	Test Method
Colour	White	
Thickness (Composite)	>1.5mm	ASTM D 3767
Elongation	>500%	ASTM D 412
Tensile strength, film	>25 MPa	ASTM D 412
Resistance to hydrostatic head	70m	ASTM D 5385
Low Temperature Flexibility(<-23°C)	Pass	ASTM D 1970
Puncture resistance	Min. 1000 N	ASTM E 154
Peel adhesion to concrete	>1200 N/m	ASTM D 903
Lap peel adhesion	>450 N/m	ASTM D 1876
Dimension Stability	<0.5%	ASTM D 1204-4

APPLICATION METHOD

Substrate 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. Grout around all penetrations such as utility conduits, etc. for stability.

Horizontal Blinding — The substrate must be free of loose aggregate and sharp protrusions. Avoid curved or rounded substrates. The surface does not need to be dry, but standing water must be removed.

Vertical Sheet Piling — 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

Place the SmartCare Pre Apply HDPE 80 membrane HDPE film side to the substrate with particulate layer side up, facing the concrete pour. End laps should be staggered to avoid buildup of layers. 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. Ensure a continuous bond is achieved without creases and roll firmly with a heavy roller. Any initial tack will quickly disappear.

Roll Ends and Cut Edges

Overlap all roll ends and cut edges by a minimum 75mm and ensure the area is clean and free from contamination, wiping with a damp cloth if necessary. Remove all floating particulates from the surface of the SmartCare HDPE 80 pre-applied waterproofing membrane by brush. Apply SmartCare HDPE Tape by peeling off release paper and fix the adhesive side on substrate. Roll firmly to ensure complete adhesion without creases or voids. Peel off the other layer of release paper and apply another piece of SmartCare Pre Apply HDPE 80 to the adhesive tape. Roll firmly to ensure complete adhesion. Alternatively, remove all floating particulates from the surface of SmartCare Pre Apply HDPE 80 by brush.

Pouring of Concrete

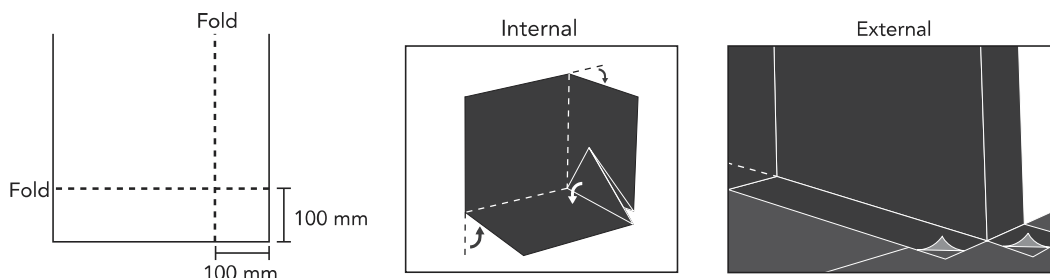
The concrete must be poured within 42 days of application of the membrane. During pouring, take care when vibrating concrete to avoid damaging the waterproofing materials.

Formwork Removal

SmartCare Pre Apply HDPE 80 pre-applied waterproofing membrane can be applied to removable formwork, such as slab perimeters, elevator and lift pits, etc. Once the concrete is poured the formwork must remain in place until the concrete has gained sufficient compressive strength to develop the surface bond. SmartCare Pre Apply HDPE 80 pre-applied waterproofing membrane is not recommended for conventional twin-sided wall forming systems. As a guide, to reach the minimum compressive strength stated above, a structural concrete mix with an ultimate strength of 40N/ mm² will typically require a cure time of approximately six days at an average ambient temperature of -4°C, or two days at 21°C. Please contact your local Asian Paints Technical Officer for more details.

Corners

Internal and external corners should be formed as shown in the diagrams returning the membrane a minimum of 100mm and sealing with SmartCare HDPE Bonding Tape. Ensure that the apex of the corner is covered and sealed with tape and roll firmly. Crease and fold the membrane to ensure a close fit to the substrate profile and avoid hollows.



PROTECTION

No protection is required for SmartCare PreApply HDPE membrane. Reinforcement can be directly tied over it.

STORAGE

Dry conditions below +40°C. Store indoors or under cover on pallets. Do not double stack pallets.