

PREFLEX 3000

TECHNICAL DATA SHEET

Pre-applied HDPE, fully bonded waterproofing membrane

24/04/2024

DESCRIPTION

PREFLEX 3000 is a pre-applied HDPE, fully bonded waterproofing membrane. PREFLEX 3000 is supplied with a self-adhesive selvage along one side of the roll to provide sealed laps. It consists of a multi-layer composite, including high-density PE film, a polymer layer, and a unique proprietary layer, which allows poured concrete to bond fully with the membrane, providing an excellent barrier against water passage between the waterproofing membrane and the structure. This integral bond is specifically designed to provide a robust barrier against water, moisture, and gas, preventing both ingress and lateral migration. Selvage overlaps deliver superior performance in harsh conditions without the need for specialized equipment, heat, or power.

PRE-APPLIED HDPE, SELF-ADHESIVE, FULLY BONDED WATERPROOFING MEMBRANE (WITH SAND)

ADVANTAGES

- Acts as a vapor barrier, forming a unique integral bond to the poured concrete and remaining in place if any ground settlement of substrate occurs.
- Simple and reliable application with no primers or protection required.
- Combines toughness with flexibility for detailing around edges.
- Resistant to groundwater and protects concrete from ground salts, chlorides, sulfates, and hydrocarbons in contaminated areas.
- Unaffected by wet job site conditions, ensuring it doesn't activate prematurely.
- Inherently waterproof as supplied, this passive, non-reactive waterproofing system does not require water activation.
- Waterproofing is not dependent on confining pressures or hydration.
- Designed with fully adhered watertight seams and straightforward detailing for ease of installation.
- Quick roll-out installation reduces both time and cost.
- Release liner-free design speeds up installation and minimizes construction site waste.
- Easy to install with no need for priming or fillets.
- Can be applied to permanent formwork, maximizing the use of confined spaces.
- Self-protecting, allowing immediate traffic after application and ready for reinforcement placement.
- PREFLEX 3000 is resilient to freeze/thaw and wet/dry cycles.
- Chemical resistance helps protect structures from salt or sulfate attacks, effective in most soil and water types.
- Gas resistance restricts the ingress of methane, radon, benzene, toluene, gasoline, and other VOCs, including trichloroethylene and tetrachloroethylene (TCE/PCE), from landfills and natural sources, meeting gas-resistant membrane performance criteria.

No.	ITEM		Test Result				Test Method
			With Sand		Without Sand	Plain Finish	
1	Thickness Mm	HDPE Sheet	0.8	1.0	0.8	0.8	ASTM D3767 -03
		Total Thickness	1.2	1.5	1.2	1.2	
2	(23 +2)°C Tensile Strength Mpa		27	27.5	28	≥25	ASTM D412, Modified
3	(23 +2) °C Elongation At Break %		630	645	590	≥500	ASTM D412, Modified
4	(23 + 2C°) Peel Adhesion To Concrete Nm/ M		2.2	2.5	28	≥2.0	ASTM D903, Modified
5	(18-24°C) Hydrostatic Pressure Resistance		0.7MPa, 1h No Water Leakage	0.7MPa, 1h No Water Leakage	0.7MPa, 1h No Water Leakage	0.7MPa, 1h No Water Leakage	ASTM D5385-1993, Modified
6	Water Vapor Transmission Ng/ (M2·S·Pa)		(38±0.6°C Relative Humidity) 0.40	(38±0.6°C Relative Humidity) 0.40	(38±0.6°C Relative Humidity) 0.40	(38±0.6°C Relative Humidity) 0.40	ASTM E 96/E 96M 6
7	Low Temperature Flexibility		-30°C No Cracking				ASTM D1970-01
8	Static Coefficient Of Friction(Us)		0.55	0.436	0.424	0.40	ASTM D1894-14

RECOMMENDED FOR

- Basement Slab Waterproofing
- Lift Pits
- Cut and Cover Tunnels and Subway Structures
- R.C. Retaining Walls
- Underground Construction

PACKAGING

- PREFLEX 3000 is available in:
 - 1.2mm or 1.5mm thickness
 - 1m x 25m/roll or 2m x 25m/roll
- heavy-duty 1.2mm grade membrane designed for horizontal and vertical use. Designed for use below slabs and on rafts (i.e. mud slabs) and for vertical blindside applications. Designed to accept the placing of heavy reinforcement using conventional concrete spacers

Applying PREFLEX 3000 Waterproofing Membranes

Recommended Temperature Range

PREFLEX 3000 Waterproofing Membranes are adaptable to temperatures of -4°C or higher. In chilly conditions below 13°C, utilize PREFLEX 3000 S Tape for precise application.

- Ensure immaculate surface conditions before implementing PREFLEX 3000 S Tape.
- Swiftly remove the release liner following the application of PREFLEX 3000 S Tape.

For temperature fluctuations between -4°C and 15.5°C, consider employing PREFLEX 3000 LT. PREFLEX 3000 Membranes are meticulously engineered for serviceability in temperatures under 49°C.

Preparation of Surfaces

General Surfaces: Prioritize the establishment of a solid, robust substrate to deter any potential movement during concrete pouring. Surfaces ought to display a seamless, uniform finish without voids surpassing 12 mm.

- Execute precise grouting around penetrations like utility conduits to ensure structural stability.

Horizontal Surfaces: Eliminate any loose debris and protruding elements. Steer clear of surfaces exhibiting irregular contours.

- When addressing surfaces situated over earth or crushed stone, ensure thorough compaction to forestall any shifting during traffic or concrete pouring.
- While surface dryness is not obligatory, it's imperative to eliminate any standing water.

Vertical Surfaces: Leverage concrete, plywood, or authorized materials to provide robust support for the Membrane. Implement good alignment of board systems like timber lagging to avoid any misalignment beyond 12 mm.

Application of Membranes

For Horizontal Surfaces:

- a. Preparation: Lay the PREFLEX 3000 membrane at the required length, considering site conditions. Ensure the surface is clean, smooth, and free from any debris.
- b. Alignment: Position the membrane with the sandy surface facing the concrete pour. Unroll the membrane carefully, avoiding any wrinkles or folds.
- c. Lap Placement: Arrange the membrane in a staggered laying method to prevent the buildup of end joints. Align each sheet against the previously laid one, leaving edge laps of 80-120mm and end laps of 80-120mm.
- d. Adhesive Application: Remove all backing adhesive strips from the membrane. Press firmly at all joints and overlaps to ensure a secure bond.
- e. Rolling: After applying the adhesive, use a roller to firmly press down on the membrane. This ensures complete adhesion between layers and helps create a watertight seal.

For Vertical Surfaces:

- a. Preparation: Lay out the PREFLEX 3000 membrane according to the required length, considering site conditions. Ensure the surface is clean, dry, and free from any protrusions.
 - b. Alignment: Position the membrane vertically against the substrate. Unroll it carefully, ensuring the sandy surface faces outward.
 - c. Lap Placement: Arrange the membrane in a staggered manner, aligning each sheet with the previously laid one. Leave edge laps of 80-120mm and end laps of 80-120mm for proper coverage.
 - d. Adhesive Application: Remove the backing adhesive strips from the membrane. Press firmly at all joints and overlaps to ensure a strong bond between layers.
 - e. Rolling: After applying the adhesive, use a roller to firmly press down on the membrane. This ensures optimal adhesion and helps create a secure waterproof barrier on vertical surfaces.
- Before initiating the concrete pouring process, remove the release liner from all areas of PREFLEX 3000 Membrane and PREFLEX 3000 S Tape. Ensure that the surface is pristine, dry, and devoid of any standing water

CAPPING/DETAIL

For joining PREFLEX 3000 sheets without a salvage edge or self-adhesive edge, utilize PREFLEX 3000 NS Tape (0.8mm * 80mm * 20m). This double-sided self-adhesive tape roll ensures secure bonding between sheets.

For detailing capping, around penetrations or fixings, or to cap overlapping sheets where PREFLEX 3000 NS rolls have been used, employ PREFLEX 3000 S Tape (0.8mm * 120mm * 20m). This self-adhesive roll features binding sand, facilitating adherence to concrete surfaces.

For all pipe and steel fixing applications, incorporate ACTFLEX MS PRO alongside PREFLEX 3000.

Limitations:

1. Temperature Range: PREFLEX 3000 Membranes are effective within a temperature range of -4°C to 49°C. Extreme temperatures outside this range may affect performance.
2. Surface Conditions: Surfaces must be clean, dry, and compatible for proper adhesion. Excessive irregularities, moisture, or contamination may compromise installation.
3. Structural Movement: While PREFLEX 3000 accommodates limited movement, excessive substrate movement may lead to membrane damage.
4. Weather Conditions: Application during rainy weather is not recommended, as moisture may affect adhesion and performance.

STORAGE AND SHELF LIFE

10 Months when stored in the original, unopened/undamaged containers, in cool dry conditions and protected from sunlight at temperatures between 10°C and 25°C. The shelf life of polyurethane sealant is related to the temperature and humidity of the environment.

The recommended storage temperature is 10-25°C, humidity is <50% R.H.

Do not transportation or store in areas with temperature is over 28°C or the humidity is over 80% R.H.

CLEANING

Clean up immediately while still wet. Wipe down with solvent to clean tools & equipment. Once dry, is difficult to remove and mechanical means may be necessary. No.1. Observe all OH&S and MSDS information pertaining to safe usage and handling of solvents.

DO NOT discharge product or water from cleaning into sewer or waterways.

DO NOT touch the spill material.

SAFETY -WHEN HANDLING DO NOT EAT, DRINK OR SMOKE

ACTFLEX 500 NP PRIMER is hazardous and may cause skin and/or eye irritations. Use for intended purpose only. Observe good industrial hygiene. Keep all sources of ignition away. Always use in a well-ventilated area and wear Personal Protection Equipment (PPE. Change soiled work clothes and wash hands before breaks and after finishing work. In case of eye contact, rinse with plenty of water: If inhaled, remove to fresh air, if discomfort persists, if any breathing difficulties occur or if swallowed (do **NOT** induce vomiting), immediately contact Doctor or Poisons Information centre and seek medical attention. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or 0800 764 766 (NZ). or a doctor for advice. **IN TRANSPORT EMERGENCY DIAL 000 – POLICE-FIRE BRIGADE.** Local regulations as well as health and safety advice on packaging labels must be observed. For more information, please download a copy of the SDS from www.thewaterproofingshop.com.au KEEP OUT OF REACH OF CHILDREN.

DO NOT allow wash water from cleaning or process equipment to enter drains.

DO NOT discharge into sewer or waterways.

DO NOT seal or stopper drums being decontaminated as CO2 gas is generated and may pressurise containers.

Data Sheet

This Technical Data Sheet and the Material Safety Data Sheet (SDS) may be revised at any time to comply with relevant changes to the Australian Standards or to include changes to current technology. Always read the current SDS and TDS carefully prior to use, as application and performance data may change from time to time. It is always best to request a copy of the latest technical data from Actech Protective Coatings by calling 02 8021 3517 or emailing admin@actechpc.com.au. Data provided is typical but does not constitute a full specification. This should be sighted from the company for specific projects.

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