

TOPPROOF PE 300

High Performance Pre-Applied HDPE Fully Bonded Waterproofing Membrane System Bonding

Description

TOPPROOF PE 300 is a high-performance, pre-applied waterproofing membrane system designed for below-ground reinforced concrete structures.

It consists of a multi-layer composite HDPE membrane with an advanced pressure-sensitive adhesive layer, engineered to form a continuous, permanent bond with freshly poured concrete, preventing lateral water migration between membrane and structure.

Unlike conventional loose-laid membranes, TOPPROOF PE 300 provides a fully bonded waterproofing barrier, ensuring long-term protection even under high hydrostatic pressure.

Typical Applications

- Basement slab and retaining walls
- Underground structures and substructures
- Tunnels and subway systems
- Ground Floor slabs
- Lift pits, pile caps, and raft foundations
- Water-retaining and water-excluding structures

Key Features & Benefits

- Fully bonded system – prevents water tracking
- Pre-applied installation - no post-application risk
- High puncture and tear resistance - suitable for site traffic
- Excellent resistance to hydrostatic pressure (>70 m head)
- Gas barrier performance
- Compatible with green and wet concrete placement
- No protection screed required
- Fast and simple installation with taped joints
- Can be installed directly onto compacted substrates

- Good chemical resistance for aggressive soil conditions

Build-up System

- Compacted soil / blinding layer
- TOPPROOF PE 300 membrane (pre-applied)
- Reinforcement steel
- Cast in-situ concrete

Technical Properties

Property	Standard	Value
Membrane Type	–	HDPE composite with adhesive
Thickness	–	1.2 mm
Tensile Strength	ASTM D412	≥ 27 MPa
Elongation at Break	ASTM D412	≥ 500%
Hydrostatic Pressure Resistance	ASTM D5385	≥ 70 m
Crack Bridging	ASTM C836	Pass
Water Vapor Transmission	ASTM E96	0 g/m ² /day
Puncture Resistance	ASTM E154	≥ 900 N
Peel Adhesion to Concrete	ASTM D903	≥ 1.8 N/mm ²
Lap Peel Adhesion	ASTM D1876	≥ 1400 N/m

Compliance & Standards

- ASTM D412 – Tensile properties
- ASTM D5385 – Hydrostatic resistance
- ASTM E96 – Water vapor transmission
- ASTM E154 – Puncture resistance
- ASTM D903 / D1876 – Adhesion performance

Application Instruction

Substrate Preparation

- Surface must be smooth, compacted, and free of sharp protrusions.
- Remove loose particles, debris, standing water.
- Repair voids and irregularities prior to installation.

Horizontal Installation

- Lay membrane with adhesive/sand side facing upward (towards concrete).
- Overlap joints at a minimum of 75 mm.
- Seal laps using TOPPROOF PE Tape
- Ensure continuous and wrinkle-free installation.

Vertical Installation

- Installation of permanent or temporary formwork.
- Fix membrane mechanically along selvedge edge.
- Ensure correct alignment prior to reinforcement fixing.

Detailing

- Overlap all cut edges ≥ 75 mm.
- Seal using compatible tape.
- Treat penetrations, pile heads, and joints with detailing system.

Protection and Exposure

- Membrane can tolerate limited exposure, but protection is recommended.
- Any damage must be repaired using:
 - Patch membrane
 - Minimum 50 mm overlap
- Inspect before concrete pour.

Packaging

20m² per roll.

Storage & Shelf Life

- Store in dry, shaded conditions
- Shelf life: 12 months (Unopened)

Health & Safety

It is recommended to use PPE and avoid contact with skin and eyes and take precaution for handling the product.

Technical Support

Topkrete offers a technical support package to specifies, end-users and contractors, as well as on site technical assistance.

Additional Information

Topkrete manufacturers and offers a wide range of complementary products which includes waterstop, waterproofing, products, grouts, anchors, specialized flooring products. In addition, a wide range of products formulated for repair and refurbishment of spelled concrete are available.

Warranty

Topkrete Sdn Bhd warrants that the products manufactured by it shall be free from material defects and will conform to formulation standards and contain all components in their proper proportion. Should any of the products be proven defective, the liability to TOPKRETE SDN BHD shall be limited to replacement of the material proven to be defective, and TOPKRETE SDN BHD shall in no case be liable otherwise or for incidental or consequential damages. **TOPKRETE SDN BHD MAKES NO WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED.** User shall determine the suitability of the product for its intended use and assume all risks and liability in connection therewith.

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