

TOPSEAL PB 290

High-Performance Polyurethane-Modified Bituminous Waterproofing Membrane (Liquid Applied)

Description

TOPSEAL PB 290 is a premium-grade, single-component, water-based polyurethane-modified bituminous waterproofing membrane formulated to provide a seamless, highly elastic, and durable waterproofing barrier.

Upon curing, it forms a continuous, joint-free membrane with excellent adhesion to concrete and masonry substrates, capable of accommodating structural movement and bridging cracks.

The product is designed for non-exposed and protected waterproofing systems, with the option of reinforcement for enhanced mechanical performance

Uses

TOPSEAL PB 290 is suitable for:

Roofing & Structures

- Reinforced concrete flat roofs (non-exposed systems)
- Roof slabs with screed or protection layer
- Car porch roofs

Below-Ground Waterproofing

- Basement walls (positive side)
- Retaining walls
- Foundation walls

Wet Areas

- Toilets and bathrooms
- Kitchens
- Balconies (non-UV exposed)

Others

- Planter boxes
- Brick walls
- Podium decks (protected system)

Advantage

- One-component, ready-to-use system
- Seamless waterproofing with no joints or laps
- Excellent adhesion to concrete and masonry
- High elasticity with superior crack-bridging ability
- Easy application by brush, roller, or spray
- Water-based, low VOC, environmentally friendly
- Good resistance to water ingress and hydrostatic pressure
- Compatible with reinforcement mesh for enhanced durability
- Cost-effective compared to sheet membranes
- Suitable for complex detailing areas

Standard & Compliance

Designed and tested in accordance with relevant international standards:

- **ASTM D412** – Tensile strength & elongation
- **ASTM D7234** – Pull-off adhesion strength
- **ASTM D6083 / ASTM C836 (Reference system performance)**
- **EN 14891 (Reference classification for liquid-applied membranes)**
- **BS 6920 (Non-toxic, where applicable system applied)**

Note: System performance depends on application method and reinforcement.

Product Information

Property	Value
Appearance	Viscous liquid
Color	Black (bituminous)
Chemical Base	Polyurethane-modified bitumen emulsion
Packaging	20 L pail
Shelf Life	12 months
Storage Conditions	Store dry at +5°C to +30°C

Technical Data

(Typical values at 27°C, 60% RH)

Property	Test Method	Values
Solid Content	Internal	≥ 65%
Density	ASTM D1475	~1.05 kg/L
Tensile Strength	ASTM D412	≥ 1.2 MPa
Tensile Strength (reinforced)	ASTM D412	≥ 500%
Adhesion to Concrete	ASTM D7234	≥ 1.0 MPa
Crack Bridging	EN 14891	Class A3 (>2.5 mm)
Water Permeability	EN 14891	No penetration
Water Vapor Transmission	ASTM E96	~1.0 g/m ² /24h
Resistance to Hydrostatic Pressure	ASTM D5385	≥ 3 bar
Service Temperature	Internal	- 5°C to 70°C

System Build-Up

A. Standard System (Non-Reinforced)

- Primer: diluted TOPSEAL PB 290
- Membrane: 2–3 coats neat application

B. Reinforced System (Recommended)

- Primer coat
- 1st coat embedded with fiberglass mesh / polyester fleece

C. Protected Roof System

- Waterproofing membrane
- Protection screed (40-75mm)
- Optional insulation layer

Substrate Quality

Substrate must be:

- Structurally sound
- Clean, dry, and free from contaminants
- Free from laitance, oil, grease, curing compounds
- Smooth and even
- Without standing water

Surface Preparation

- Mechanical cleaning (grinding, brushing, or water jetting)
- Repair defects with suitable repair mortar
- Seal cracks and joint
- From 45° cementitious fillet at wall-floor junctions

Priming

Dilute TOPSEAL PB 290 with clean water:

- Ratio: 1: 1
- Coverage: 0.2 – 0.3 L/m²

Allow primer to dry before next application.

Application

Apply using:

- Brush
- Roller
- Airless spray

Consumption

Layer	Consumption
Each coat	0.6 – 0.8 kg/m ²
Total (2 coats)	1.2 – 1.6 kg.m ²
Total (3 coats)	1.8 – 2.4 kg/m ²

Apply coats perpendicular to each other.

Application Condition

- Substrate temperature: +5°C to +40°C
- Ambient temperature: +5°C to +40°C
- Do not apply during rain
- Avoid application on saturated substrates
- Ensure good ventilation

Drying & Curing

Stage	Time
Touch dry	2 – 4 hours
Recoat time	6 – 12 hours
Full cure	3 – 7 days

It depends on temperature, humidity, and thickness

Protection

- Protect from rain for at least 24 hours
- For roofs: apply protection screed or tiles
- Not UV-resistant – must be covered

Cleaning

- Clean tools with water immediately
- Hardened material: mechanical removal only

Limitations

- Not suitable for permanent UV exposure
- Not for negative-side waterproofing
- Avoid application on:
 - contaminated surfaces
 - weak substrates
 - standing water
- protect from mechanical damage after application
- not trafficable without protection layer

Health & Safety

- Use gloves, goggles, and protective clothing
- Avoid contact with skin and eyes
- Ensure adequate ventilation
- Refer to Safety Data Sheet (SDS)

System Advantages vs Conventional Bitumen

Feature	Topseal PB 290	Torch-On Membrane
Application	Cold applied	Hot torch
Joints	Seamless	Overlaps required
Safety	No flame	Fire risk
Detailing	Easy	Difficult
Repair	Simple	Complex

Typical Applications Details

- Pipe penetrations → reinforced system Required
- Corners → apply fillets + reinforcement
- Expansion joints → special detailing required

Technical Support

Topkrete offers a technical support package to specifiers, 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

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