

TOPSEAL PU 200 (EXPOSED SYSTEM)

Two-Component Aliphatic Polyurethane Liquid-Applied Waterproofing Membrane

Description

TOPSEAL PU 200 (Exposed System) is a high-performance, two-component, solvent-free aliphatic polyurethane waterproofing membrane designed for UV-exposed applications. It forms a seamless, durable and elastic waterproofing layer with excellent resistance to UV radiation, weathering and environmental aging.

Unlike conventional aromatic PU systems, TOPSEAL PU 200 exhibits non-yellowing performance, ensuring long-term aesthetic and functional durability when exposed to sunlight.

Key Features

- UV-resistant aliphatic system (non-yellowing)
- Suitable direct exposed roofs (no screed required)
- Excellent weathering and aging resistance
- Seamless, joint-free membrane
- High elasticity with crack-bridging capability
- Excellent adhesion to concrete and metal substrates
- Good resistance to standing water and ponding
- Cold-applied, easy installation
- Long service life for exposed environment

Typical Applications

- Exposed RC flat roofs
- Podium decks (exposed system)
- Car porch roofs
- Balconies and terraces (without tiles)
- Metal roofs (with correct primer)
- Refurbishment of existing waterproofing

System Build-Up

1. Substrate

- Concrete / screed / metal surface

2. Primer

- Topseal EP Primer (dry substrate < 4% moisture)
- Topseal WEP Primer (damp substrate > 4% moisture)

Consumption: ~0.25 kg/m²

3. Waterproofing Membrane

- TOPSEAL PU 200 (2 coats minimum)

Total Consumption:

1.5 – 2.0 kg/m² (exposed system requirement)

4. Reinforcement

Polyester fabric at:

- Joints
- Cracks
- Upturns
- Drain outlets

5. Optional Protective / Topcoat

Topcoat PU Aliphatic UV Sealer

Improvements:

- UV stability
- Color retention
- Abrasion resistance
- Cleanability

Technical Properties

Property	Test Method	Typical Value
Chemical Base	—	Aliphatic Polyurethane
Tensile Strength	ASTM D412	$\geq 2.0 \text{ N/mm}^2$
Elongation at Break	ASTM D412	$\geq 200\%$
Crack Bridging	EN 1062-7	Class A3
Adhesion Strength	EN 1542	$\geq 2.0 \text{ N/mm}^2$
Water Tightness	DIN 1045	Pass @ 5 bar
UV Resistance	ASTM G154	No cracking / no chalking
Shore Hardness	ASTM D2240	~80
Service Temperature	—	-20°C to +80°C

Application Thickness

System	Dry Film Thickness
Standard	0.8 – 1.0 mm
Exposed System	1.5 – 2.0 mm (mandatory)

This is critical, many failures happen due to under-thickness.

Application Notes

- Apply minimum 2 coats (cross direction)
- Ensure no pinholes / holidays
- Avoid application under:
 - Rain
 - High humidity (>85%)
- Substrate temperature: +5°C to +40°C
- Do not apply on:
 - Weak concrete
 - Dusty surfaces
 - Oil contamination

UV & Weathering Performance

Topseal PU 200 is formulated using aliphatic polyurethane technology, providing:

- Excellent UV resistance (no yellowing)
- High resistance to:
 - Tropical rain
 - Heat cycling
 - Humidity
- Long-term elasticity retention

Suitable for Malaysia climate (high UV + heavy rain)

Limitations

- Dark colors may absorb heat → surface temperature increase
- For heavy traffic → additional protective layer required
- Not designed as final traffic wearing surface unless topcoat applied
- Ponding water > 72 hours → require thicker system

Consumption

Application	Consumption
Primer	0.25 kg/m ²
Membrane	1.5 – 2.0 kg/m ²
Total System	~1.75 – 2.25 kg/m ²

Packaging

- Set A + B:
 - 5 kg / set (recommended market standard)
 - Custom packing available

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 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

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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Topkrete Sdn Bhd (597943-M)

Office : 19-G, Blok A, Jalan Atmosphere 3,
Pusat Perniagaan Atmosphere,
Bandar Putra Permai,
43300 Seri Kembangan,
Selangor Darul Ehsan. Malaysia
Tel: +603- 8957 8999 Fax: +603-8959 1661
Email: info@topkrete.com
www.topkrete.com

Factory : No.3, Jalan Utama 1/12,
Taman Perindustrian Puchong Utama,
47100 Puchong,
Selangor Darul Ehsan. Malaysia.
Tel : +603-8063 1883 Fax: +603-8063 1983