PolyProof HPU

Polyurethane-Based Elastomeric Hybrid Waterproofing Membrane

Description

PolyProof HPU is a liquid-applied waterproofing and protective coating for concrete structures, based on polyurethane hybrid technology. The polyurethane is modified with specially selected polymers to produce a tough, flexible, and durable membrane with excellent long-term performance.

The coating is completely free from coal tar and other hazardous ingredients, making it a safe and environmentally responsible solution for structural protection.

Technical Properties

Appearance	Liquid
Color	Grey / White
Density	1.35 Kg/l
Tensile Strength	> 1.5 N/mm²
Adhesion to Concrete	2.5 N/mm²
Water Vapor Permeability	0.59 m
Elongation at Break	> 500%
Crack Bridging	Up to 2.5 mm
Capillary Water Absorption	0.01 kg/m².h^{0,5}
Touch Dry Time	3 - 4 Hours
Overcoating	24 Hours
Consumption	1.35kg/m²/2coats

All values are nominal and subject to a tolerance of ± 5-10%

Key Features

- Eco-friendly formulation
- High elasticity
- Effective crack-bridging capability
- Excellent adhesion to substrates
- High tensile strength
- High UV resistance
- High solar reflectivity
- Designed for aggressive climatic

Area Of Use

- Waterproofing of roofs, terraces, balconies, and exposed surfaces
- Protective coating for sprayed polyurethane foam insulation
- Solar-reflective roof coating to improve energy efficiency
- Waterproofing of wet areas
- Waterproofing of concrete, cementitious substrates, gypsum boards, wood and metal-based panels

Packaging

PolyProof HPU is available in:
20 Kg Pail

Storage

Keep the product in dry and sheltered place at temperature between +5ºC to +35ºC. In these conditions and in closed original containers, the product will have a shelf life of at least 12 months.

Standard Compliance

- EN 1504-2
- EN ISO 7783-2, Class I
- EN ISO 1062-3
- EN ISO 527
- EN 1542

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Application Procedure

Surface Preparation

All substrates must be fully cured, structurally sound, clean, and free from dust, loose particles, laitance, oil residues, curing compounds, and previous coatings.

For highly porous substrates, it is recommended to apply a primer coat consisting of PolyProof HPU diluted with up to 20% clean water. This primer seals surface pores, stabilizes the substrate, and enhances adhesion of subsequent coats.

Metal surfaces must be thoroughly cleaned by wire brushing or sandblasting to remove rust, corrosion, and mill scale.

For application over existing bituminous membranes, surfaces should be brushed and cleaned with water.

If aluminized protective coatings are present, they must be removed using a proper solvent, followed by thorough washing with water.

Mixing Procedure

PolyProof HPU is supplied ready for use in 20 Kg pails.

Prior to application, mix the contents thoroughly to ensure uniform consistency and eliminate any sedimentation.

The material can be applied using a roller, brush, or spray equipment.

For specialized application methods, consultation with Polycrete Technical Dept. is recommended.

Application Instruction

Apply the material using a brush or roller. Once the first coat has dried, apply a second coat at right angles to the initial application.

A minimum of two coats of PolyProof HPU is recommended to achieve an approximate dry film thickness of 1.0 mm; additional coats may be applied where greater thickness is required.

Fiber mesh reinforcement shall be installed at corners, fillets, pipe penetrations, drains, cracks, and areas subject to significant movement. The fiber mesh must be embedded into the wet first coat prior to the application of subsequent coats.

Curing

A minimum drying time of 24 hours is required between successive coats. The membrane achieves sufficient curing for light foot traffic after approximately 48 hours, while full mechanical and performance properties are attained after 7 days.

Quality & Care

All products provided by PolyCrete are manufactured under a management system certified to conform to the requirements of the quality and environmental health & safety standards ISO 9001, ISO 14001 & ISO 45001.

Health & Safety

Wear gloves, goggles to avoid any contact with eyes and skin. In case of splashes in the eyes wash abundantly with warm water and consult a doctor. For further information or particular use, contact PolyCrete Technical Department.

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