

Shieldproof PU200

One-component, Polyurethane Roof Coating



Description

Shieldproof PU200 is a one-component, liquid-applied, polyurethane-based roof coating that cures by reacting with atmospheric moisture to form a seamless, durable, and highly elastic waterproof membrane. It provides excellent adhesion to most substrates and delivers long-term protection against weathering and moisture ingress on both new and existing roofs.

Uses

- Ideal for applications where fast application is required.
- Suitable for various substrates such as concrete, cement, asbestos and roof tiles.
- Can be used under toilets and kitchens tiles.
- For roofs, and roofs with polyurethane insulation foam.
- Balconies, terraces, flowerbeds.

Characteristics / Advantages

- Easy to apply.
- Long-term waterproofing and surface protection.
- Excellent resistance to rain, frost, and UV.
- Superior performance against standing water without peeling.
- Excellent adhesion on several substrates.
- Excellent thermal resistance up to +80 °C without softening or tackiness.
- Remains highly elastic at very low temperatures (-40°C).
- White color provides high solar reflectivity, helping to reduce indoor temperatures during summer.
- Excellent crack-bridging properties.
- Suitable for pedestrian traffic.
- High mechanical properties such as tensile strength, tear strength, and abrasion resistance.
- Water vapor permeable.
- Good resistance to chemicals.
- Non-toxic once fully cured

Packaging

Shieldproof PU200 is supplied in 25 kg bucket.

Shelf Life and Storage

Shieldproof PU200 has a shelf life of 12 months when stored in its original unopened packaging in cool and dry conditions, protected from direct sunlight, heat, and moisture. Shelf life may be reduced if the recommended storage conditions are not followed.

Typical Properties

Color	White and other colors are available upon request.
Curing Time	12 – 24 hours
Dynamic Viscosity (EN ISO 3219) @23°C, Shear rate 100 [1/s]	1350 mPa.s
Density (DIN EN ISO 2811-1) @21 °C	1.41 g/cm ³
Temperature Variations Resistance	-40 to 80 °C
Surface Membrane Formation Time @ 23 °C, 50% R.H	4 hours
Elongation at Break (DIN 53504)	700%
Tensile Strength (DIN 53504)	6.50 MPa
Hardness Shore A (DIN 53505)	74
Water Vapor Permeability (DIN EN 1931) @23 °C, 0/75 % R.H	13.1 g/m ² /day
Impermeability to water (DIN EN 1928, 1m water column, 24h)	Watertight
Adhesion on concrete (with primer)	>2 MPa
Accelerated Weathering Test, UV & water exposure, EOTA TR-010, Radiant exposure 400 MJ/m ² , 2400 hours.	Passed. No significant changes
Resistance against thermal ageing, EOTA TR-011, 100 days at 80 °C	Passed. No significant changes
Fatigue resistance, EOTA TR-008, -10 °C, initial crack : 1 mm, change in crack width : 1 mm, Number of cycles : 500	No cracks

Standard Compliance

Shieldproof PU200 complies to ETAG 005, W2, S, P4, S1 to S4, TL4, TH4, Class E.

Application Instructions

1. Surface Preparation

The substrate must be sound and free from dust, loose materials, surface contamination, and materials that may reduce bond or prevent adhesion. Laitance must be removed by grit blasting. Joints and cracks must be sealed using **Shieldseal PU25**.

A moisture content of less than 5% is recommended for concrete surfaces.

2. Priming

Priming is not required under normal application conditions. However, **Shieldproof PU200** may be diluted with 5–10% of Xylene and applied as base coat prior to the application of subsequent layers of the waterproof coating.

3. Application

Shieldproof PU200 is applied onto the prepared dry substrate by brush, roller, or airless spray equipment. The first coat must be applied after at least one hour and within 24 hours after applying the primer. It is then applied in 2–3 layers with a rate of 0.7–0.8 kg per coat within the overcoating period (after at least 3 hours and within 48 hours) to enhance adhesion. Use a medium bristle brush or short-nap synthetic roller cover with phenolic core.

For improved mechanical strength and crack-bridging performance, **Shieldproof PU200** should be applied together with **Shield GeoTex** (non-woven polyester geotextile). The geotextile is embedded into the first fresh coat, followed by two additional coats, providing effective sealing of joints, cracks, and corners, especially at floor-to-wall intersections and around details such as openings, or solar panel bases.

For spray application, **Shieldproof PU200** may be diluted with up to 10% of Xylene.

When **Shieldproof PU200** is wet, it may become slippery. To prevent this, broadcast quartz sand "**Shield Quartztop**" of suitable particle size onto the fresh coating.

4. Cleaning

All mixing and application equipment should be cleaned with Xylene. Hardened material should be mechanically removed.

Consumption

Approximately 1.50 – 1.80 kg/m² per two coats.

Consumption depends on the roughness of the surface or the specifications of the application.

Limitations

- Avoid applying **Shieldproof PU200** at more than (0.7–0.8) kg per coat, as this may result in air bubble formation within the coating.
- **Shieldproof PU200** may be diluted with up to 10% of Xylene; do not dilute with water
- **Shieldproof PU200** is not suitable for application as a directly exposed layer on swimming pools
- Do not apply during rainy conditions.

Safety Instructions

Avoid contact with the eyes and skin. In case of direct contact with the skin, wash the affected area immediately with water for several minutes. If it comes into contact with the eyes, rinse immediately with lukewarm water for at least 15 minutes and get medical advice or treatment if any emergency warning signs appear. For further information, refer to the Material Safety Data Sheet.

Technical Support

Refer to technical information, method statement, or technical support team for any inquiry.

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