

Shieldprotect PU100

Two-component, Aliphatic Acrylic Polyurethane Topcoat



Description

Shieldprotect PU100 is an aliphatic polyurethane topcoat where chemical and UV resistance, toughness, and durability are required. **Shieldprotect PU100** has excellent resistance to corrosion, chemicals, and abrasion, and is available in a wide range of colors.

Uses

- Suitable for various substrates such as concrete, steel, and Aluminum.
- Aircraft, aerospace, and automotive.
- Bridges and highway structures.
- Industrial applications, heavy machinery, pipes, tanks and storage tanks.
- Marine applications.
- Manufacturing plants and facilities.

Characteristics / Advantages

- Easy to use and clean.
- Chemical resistant.
- Flexible and durable.
- Resistant to UV and weathering conditions.
- High gloss finish and color stability.
- Withstands moisture, temperature changes, and harsh weather conditions.

Coverage

Approximately 14 m²/L at 50 microns thickness, but this may vary due to site wastage, substrate condition/profile, and application thickness

Shelf Life and Storage

Shieldprotect PU100 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	Wide Range
Solid Content (by vol.)	51 ± 2%
Flash Point (ASTM D3828, method B)	31 °C
Sag Resistance	200 µm
Dry Film Thickness	75 – 125 microns
Drying Time (ASTM D5895:2003)	2 – 3 hours
Overcoating Time (ASTM D5895:2004)	6 – 7 hours
Full Cure (25C, 50% RH)	7 days
Temperature Resistance	Up to 95 °C
Taber Abrasion (ASTM D4060) 1000 cycles, (CS-10)	120 mg
Hardness (ASTM D3363)	Pass at 7H
Adhesion by Pull-off (ASTM D4541)	> 2 MPa
Scrub Resistance(175µm) (ASTM D 2486)	> 1600 cycles
Impact Resistance (ISO 6272-1)	Pass

Packaging

Shieldprotect PU100 is supplied in 3.6- and 19-L buckets.

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.

Application Instructions

1. Surface Preparation and Priming

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. Surface defects must be repaired using **Shieldrep ER60**.

Steel surfaces must be prepared to achieve a surface profile SA 2.5. Apply any suitable polyurethane primer to prime and seal the substrate before the application of **Shieldprotect PU100**. Application temperature is 5 – 43 °C, and a maximum humidity of 90%.

2. Mixing

Components A and **B** should be stirred separately before being mixed to eliminate any case of settlement.

Component B (hardener pack) should be added to **Component A** (base pack) and mixed using a low-speed mixing drill for 3 minutes while reaching the walls and bottom of the container until a homogeneous and consistent material is obtained.

3. Application

Shieldprotect PU100 is applied onto the prepared substrate by brush, roller, or airless spray equipment. Use a medium bristle brush or short-nap synthetic roller cover with phenolic core.

If the second coat is required, apply another coat within the overcoating period to enhance adhesion.

4. Cleaning

All mixing and application equipment should be cleaned with a Shield solvent. Hardened material should be mechanically removed.

Technical Support

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

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