

Protec System
to
Concrete Deck
(Waterproofing Only)

OUTLINE NBS SPECIFICATION

REF: PR10103 (NBS)

nbsPlus

 **polyroof**
advanced liquid roofing

J31 LIQUID APPLIED WATERPROOF ROOF COATINGS

To be read with Preliminaries/General conditions.

TYPE(S) OF COATING

110 COLD DECK ROOF COATING

- Substrate: New / existing concrete deck / screed.
 - Preparation: Make good concrete deck / screed (as outlined in section 555).
- Waterproof coating: Protec System (flexible polyester resin).
 - System manufacturer: Polyroof Products Limited
Furness House
Castle Park Industrial Estate
Flint
Flintshire
CH6 5XA
T: 0800 801 890
E: technical@polyroof.co.uk
 - Primer reference: Uni-Primer DP
 - Coating reference: Protec System
 - Primer application: Uni-Primer DP at 4 - 6m²/Litre
 - Protec first coat application: 1.3 - 1.5 Litres/m² (smooth/medium) **or** 1.5 - 2.0 Litres/m² (rough) **or** 2.0 - 2.5Lites/m² (very rough).
 - Protec second coat application: 0.5 Litres/m².
 - Reinforcement: Polymat 450 (450g/m²) to general areas in first coat.
 - Minimum dry film thickness: 1.85mm.
 - Colour: Light Grey or Chromite Grey (consult Polyroof Technical Services for advice regarding other colours).
- Surface protection: Not required for standard application. Anti-slip finishes available for occasional and regular foot traffic.
- Accessories: Not required for standard application. Polyroof pre-formed GRP trims available where new edge detailing is required.
- Other surfaces: For preparation and priming of any other surfaces not itemised in this outline specification please refer to Protec Manual issued by Polyroof Products Limited for guidance.
- Installation: The system should only be installed by contractors in possession of a current approval certificate and applied strictly in accordance with the Protec Manual issued by Polyroof Products Limited.

PERFORMANCE

210 ROOF PERFORMANCE

- General: Firmly adhered, free draining and weathertight.

PRODUCTS

315 TIMBER TRIMS

- Quality: Planed, free from wane, pitch pockets, decay and insect attack (except ambrosia beetle damage)
- Moisture content at time of covering (maximum): 22%
- Preservative treatment: CCA as section Z12 and British Wood Preserving and Damp-proofing Association Commodity Specification C8

353 WATERPROOF COATING

- Type: Flexible polyester resin
- Manufacturer: Polyroof Products Limited
 - Product Reference: Protec System.
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- Minimum dry film thickness: 1.85mm.
- Surface protection: Not required for standard application. Anti-slip finishes available for occasional and regular foot traffic.

355 PERIMETER TRIMS (OPTIONAL)

- Type: GRP trims.
- Manufacturer: Polyroof Products Limited
 - Product Reference: Polyroof Pre-Formed GRP Trims.
- Colour: Coated with waterproof coating.
- Size: Variable depending trim type.
- Lengths: 2.44m.

385 SURFACE PROTECTION (ANTI-SLIP FINISHES)

- Manufacturer: Polyroof Products Limited
 - Product Reference: Mineral Slate Grit (for occasional foot traffic) or Quartz Sand & Polyfinish (for regular foot traffic).
- Width: To be determined by contractor.
- Colour/Finish: Blue or Green (Mineral Slate Grit) or Light Grey (Quartz Sand and Polyfinish).
- Additives: Slate chippings (Mineral Slate Grit) or Quartz Sand anti-slip grit and Polyfinish hard-wearing PMMA finish.
 - Coverage of Mineral Slate Grit Anti-Slip: Apply 3rd coat of Protec Resin at a minimum coverage rate of 0.5Litres/m² and whilst wet broadcast Mineral Slate Grit at a minimum coverage rate of 2.5kg/m². Once cured remove loose grit. Approximate retained grit will be 1.5kg/m² and the remaining grit may be recovered for future use.
 - Coverage for Quartz Sand and Polyfinish: Apply 3rd coat of Protec Resin at a minimum coverage rate of 0.5Litres/m² and whilst wet broadcast clean dried Quartz Sand (0.7 – 1.2mm) at an approximate coverage rate of 4.0kg/m². Once cured remove loose sand.

Approximate finished coverage rate of sand will be 2.5kg/m² and the remaining 1.5kg may be recovered for future use. Apply Polyfinish Resin using a Polyfinish Spreader at a minimum coverage rate of 0.6Litres/m² (1.67m²/Litre). Allow to cure.

- Surface coverage: Even and full.

EXECUTION GENERALLY

410 ADVERSE WEATHER

- Do not apply coatings:
 - If the air temperature is outside the range of 3°C – 30°C, unless otherwise permitted by the coating manufacturer.
 - The system can be installed down as low as 1°C deck temperature with the addition of Product Accelerators
 - In damp or cold conditions which could cause surface condensation; during frost or if there is a risk of rain.
 - In high winds (speeds > 7 m/s) unless adequate temporary windbreaks are erected adjacent to the working area.
- Unfinished areas of roof: Keep dry.

420 SUITABILITY OF SUBSTRATES

- Substrates generally:
 - Secure, clean, dry, smooth, free from frost, contaminants, loose material, voids, protrusions and organic growths.
 - Compatible with coating system.
- Preliminary work: Complete, including:
 - Formation of upstands, kerbs, box gutters, sumps, grooves, chases and expansion joints.
 - Fixing of battens, fillets and anchoring plugs/ strips.
- Moisture content and stability: Must not impair integrity of roof.

EXISTING SUBSTRATES

515 EXISTING FLASHINGS

- General: Raise to facilitate cleaning of surfaces to receive coatings.
- Timing: Leave raised during coating application and lower only after full curing.
- Damaged lengths: Replace with new, specified in section: H71 (or similar).

520 PRELIMINARY POWER WASH TO EXISTING COVERINGS

- Timing: Before renewing existing coverings, water jet clean all areas. Allow to dry.

555 MAKING GOOD EXISTING CEMENTITIOUS SLABS/SCREEDS

- Loose surfaces, sharp edges and projections: Remove.
- Hollow surfaces, voids and cracks: Fill with cement-based repair mortar.

560 EXISTING EDGE TRIMS

- Fasteners: Check security. Replace as necessary.
- Existing coverings: Cut out from edge trim recess sufficient to accommodate coatings.

565 EXISTING GUTTERS/OUTLETS

- Dirt, debris and build-up of previous coverings/ coatings: Remove to restore free flow of water.

570 EXISTING CRACKS/GAPS

- General: Rake out, clean and make good with sealants or repair systems recommended by coating manufacturer.

575 FINAL POWER WASH TO EXISTING COVERINGS

- General: Water jet clean all areas. Allow to dry.

580 STERILISATION TREATMENT TO EXISTING COVERINGS

- Preliminary work: Complete including making good and cleaning down.
- Biocidal solution: Apply to all areas previously subject to organic growth. Allow to dry.

NEW SUBSTRATES (OPTIONAL)

610 FIXING TIMBER TRIMS

- Fasteners: Sherardized steel screws.
- Fixing centres (maximum): 600mm

660 FIXING PERIMETER TRIMS

- Fasteners: 18mm large headed galvanised clout nails to BS 1210
 - Fixing: 25mm from ends at 150 mm (maximum) centres.
- Jointing:
 - Butt straps / timber battens as appropriate.
- Corner pieces: Formed on-site.

ROOFING COATING SYSTEM

720 APPLYING PRIMERS

- Coverage per coat (minimum): One coat of Uni-Primer DP at 4 - 6m²/Litre.
- Surface coverage: Rolled / brushed well in to ensure local or full area coverage according to type.
- Coats: Allow to dry before overcoating.

740 MOVEMENT JOINTS IN SUBSTRATE

- Debonding tape: Apply over movement joints.
- Reinforcement strip: Apply over debonding tape.
 - Bedding: Preliminary coating application.
 - Joints: Lap in length.

- Bond: Continuous over whole surface, with no air pockets.
- Condition at completion: Smooth.

750 PRELIMINARY LOCAL REINFORCEMENTS

- Reinforcement strip: Protec Resin and 75mm wide Polymat 450 to all junctions at upstands, penetrations and outlets.
 - Bedding: Preliminary coating application.
 - Joints: Lap in length.
 - Bond: Continuous over whole surface, with no air pockets.
 - Condition at completion: Smooth.

760 APPLICATION OF ROOF COATINGS

- Continuity: Maintain full thickness of coatings around angles, junctions and features.
- Rainwater outlets: Form with watertight joints.
- Drainage systems: Do not allow liquid coatings to enter piped rainwater or foul systems.
- Edge trims: Apply coatings over horizontal leg of trim and into recess.

770 SKIRTINGS AND UPSTANDS

- Minimum upstand threshold of 150mm above finished level of the roof (to BS EN 6229).
- Top edges of coatings: Where not protected by flashings, apply into chases cut to a minimum depth of 10 mm.
- Completion of chases: When coatings are fully cured, prepare chase and apply sealant as section Z22.
- Sealant: To BS EN ISO 11600.
- Colour: As coating.

COMPLETION

910 INSPECTION

- Coating surfaces: Check when cured for discontinuities.
 - Defective Areas: Apply another coating.

940 COMPLETION

- Roof areas: Clean.
- Outlets: Clear.
- Flashings: Dressed into place.
- Work necessary to provide a weathertight finish: Complete.
- Storage of materials on finished surface: Not permitted.
- Completed coatings: Protect against damage.

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