

Protec System  
to  
Single-Ply Membrane  
(Waterproofing Only)

OUTLINE NBS SPECIFICATION

REF: PR10106 (NBS)

**nbs**Plus

 **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: Existing single-ply membrane.
  - Preparation: Subject to adhesion tests by Polyroof Technical Services. Make good existing single-ply membrane (as outlined in section 525). Thoroughly wipe with acetone prior to priming.
- 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 / SP Primer 202 (subject to adhesion tests)
    - Coating reference: Protec System.
  - Primer application (subject to adhesion tests): Uni-Primer DP at 4 - 6m<sup>2</sup>/ litre on PVC single-ply membranes, SP Primer 202 at 12-15m<sup>2</sup> / litre on TPO & EPDM single-ply membranes. For other single-ply membranes, consult Polyroof Technical Services.
  - Protec first coat application: 1.3 - 1.5 Litres/m<sup>2</sup>.
  - Protec second coat application: 0.5 Litres/m<sup>2</sup>.
  - Reinforcement: Polymat 450 (450g/m<sup>2</sup>) 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 the 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
- Primer (subject to adhesion tests): Uni-Primer DP at 4 - 6m<sup>2</sup>/ litre, SP Primer 202 at 12-15m<sup>2</sup> / litre.
- Protec first coat application: 1.3 - 1.5 Litres/m<sup>2</sup>.
- Protec second coat application: 0.5 Litres/m<sup>2</sup>.
- Reinforcement: Polymat 450 (450g/m<sup>2</sup>) to general areas in first coat.
- Colour: Light Grey or Chromite Grey (consult Polyroof Technical Services for advice regarding other colours).
- 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 3<sup>rd</sup> coat of Protec Resin at a minimum coverage rate of 0.5Litres/m<sup>2</sup> and whilst wet broadcast Mineral Slate Grit at a minimum

- coverage rate of 2.5kg/m<sup>2</sup>. Once cured remove loose grit. Approximate retained grit will be 1.5kg/m<sup>2</sup> and the remaining grit may be recovered for future use.
- Coverage for Quartz Sand and Polyfinish: Apply 3<sup>rd</sup> coat of Protec Resin at a minimum coverage rate of 0.5Litres/m<sup>2</sup> and whilst wet broadcast clean dried Quartz Sand (0.7 – 1.2mm) at an approximate coverage rate of 4.0kg/m<sup>2</sup>. Once cured remove loose sand. Approximate finished coverage rate of sand will be 2.5kg/m<sup>2</sup> 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/m<sup>2</sup> (1.67m<sup>2</sup>/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.

#### **525 RENEWING EXISTING SUBSTRATES/COVERINGS (SINGLE-PLY MEMBRANE)**

- Ensure existing membrane is firmly secured to the substrate. Use additional fixings as appropriate and in accordance with the relevant manufacturer's guidance.
- Any localised damage should be repaired or made good as appropriate.

#### **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**

---

#### **710 ADHESION TESTS**

- Requirement: Carry out a trial coating to determine priming requirements and/or system suitability.
- Nature of coating: Test patch of sufficient area to substrate. Vary surface preparation and primer suitability to determine roofing coating system methodology.

- Test results: Submit and arrange for inspection.

#### **720 APPLYING PRIMERS**

- Coverage per coat (minimum): One coat of Uni-Primer DP at 4 - 6m<sup>2</sup>/ litre, SP Primer 202 at 12-15m<sup>2</sup> / 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.

This document is a guide to assist in the production of tender documents only and is not project specific. A site survey is always recommended. It is the responsibility of the client to add and delete clauses as relevant to the contract. Nothing in this proposal - or any other literature produced by, or on behalf of, Polyroof Products Ltd - should be regarded as constituting a contract binding in law between Polyroof Products Ltd and any customer. The only contract which Polyroof will enter into is that contained in the Polyroof guarantee which takes effect only when issued in writing by Polyroof to the customer. Specimen guarantees are available on request.