

Protec System  
Warm Roof  
Cut-to-falls  
(New Build)

OUTLINE NBS SPECIFICATION

REF: PR20106 (NBS)

**nbs**Plus

 **polyroof**  
advanced liquid roofing

## J31 LIQUID APPLIED WATERPROOF ROOF COATINGS

To be read with Preliminaries/General conditions.

### TYPE(S) OF COATING

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#### 120 WARM DECK ROOF COATING

- Substrate: Suitable structural roof deck (e.g. Plywood, OSB3, Concrete or structural metal roof deck)
  - Preparation: Prime surfaces as required with Polyroof SA Primer (refer to manufacturer's instructions)
- Vapour Barrier: Self-adhesive Polyroof SA Vapour Barrier
- Insulation: Polyroof Cut-to-Falls Insulation (in accordance with Polyroof Cut-to-Falls scheme. Contact Polyroof Products Ltd for design)
- Insulation adhesive: Polyroof Twin-Pack Insulation Adhesive
- Overlay to insulation: Not required
- Carrier membrane: Not required
- 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: Not required to Polyroof RES Insulation (T&G)
    - Coating reference: Protec System
  - Local Reinforcements: Protec Resin and 75mm wide Polymat 450 to all insulation board joints, all junctions at upstands, penetrations and outlets.
  - 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 foot traffic only.
- Accessories: Polyroof pre-formed GRP trims
- 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

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### 210 ROOF PERFORMANCE

- General: Firmly adhered, free draining and weathertight

## PRODUCTS

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### 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

### 330 VAPOUR CONTROL LAYER

- Type: A self-adhesive bituminous compound with a composite aluminium foil and integral glass-fibre mat
- Manufacturer: Polyroof Products Limited
- Product Reference: Polyroof SA Vapour Barrier
- Primer: Polyroof SA Primer
- Thickness: 600 micrometres
- Vapour resistance: 4,310 MNs/g

### 333 CUT TO FALLS - WARM DECK ROOF INSULATION

- Base Layer: Polyisocyanurate (PIR) roofboard to BS 4841-3 or Expanded Polystyrene (EPS) roofboard to BS EN 13163 (min 150 KPa)
- Top Layer: Polyroof RES Insulation (T&G)
- Scheme Supplier: Polyroof Products Ltd
- Thickness: Variable as per Cut-to-Falls scheme. Scheme supplied in 2 layers.

### 353 WATERPROOF COATING

- Type: Flexible polyester
- Manufacturer: Polyroof Products Limited
  - Product Reference: Protec System
- Primer: Not required to Polyroof RES Insulation (T&G)
- Local Reinforcements: Protec Resin and 75mm wide Polymat 450 to all insulation board joints, all junctions at upstands, penetrations and outlets.
- 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 foot traffic only.

### **355 PERIMETER TRIMS**

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

### **385 SURFACE PROTECTION (ANTI-SLIP FINISHES)**

- Manufacturer: Polyroof Products Limited
  - Product Reference: Mineral Slate Grit (for occasional foot traffic only)
- Width: To be determined by contractor.
- Colour/Finish: Blue or Green.
- Additives: Slate chippings
  - Coverage: 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.
- Surface coverage: Even and full.

## **EXECUTION GENERALLY**

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### **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.

## **NEW SUBSTRATES/VAPOUR CONTROL LAYERS/WARM DECK ROOF INSULATION**

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### **610 FIXING TIMBER TRIMS**

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

### **630 LAYING VAPOUR CONTROL LAYER**

- Membrane: Bonded fully to substrate / Bonded to all crowns of the profiled sheet
- Laps: Sealed using materials and method recommended by membrane manufacturer.
- Upstands, kerbs and other penetrations: Enclose edges of insulation. Lap with coatings to form a complete seal.

### **640 LAYING WARM DECK ROOF INSULATION**

- Setting out:
  - Long edges: Fully supported and run at right angles to direction of span / existing boards / metal deck troughs / structure
  - Joints: Tongue and Groove.
  - Ends: Adequately supported
  - Joints: Tongue and Groove (staggered).
- Bonding: Polyroof Twin-Pack Insulation Adhesive applied in accordance with manufacturer's recommendations
- Mechanical fixing: Not required
- Completion: Boards must be in good condition, well-fitting and stable.

### **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**

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### **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 Polymat 450 to insulation board joints and 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**

- 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**

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#### **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.