

PROJECT SPECIFICATION

Orchard Street, Neath

P-0000100705

Prepared For

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Prepared By

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Revision

01

Issue Date

24-06-2022



SOPREMA

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DOCUMENT CONTROL SHEET

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Client:	Neil Williams - TPS Roofing Ltd
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APPROVED CONTRACTOR INSTALLATION

APPROVED INSTALLERS: Approved contractors are closely evaluated and trained before being authorised to install SOPREMA products. Close partnerships are maintained to ensure the highest standards are maintained.

SITE SUPPORT & PROJECT SIGN OFF

TECHNICAL EXPERTISE: Outstanding technical support is available from our experienced team; from design stage and bespoke specifications through to on-site support and project sign off. As a part of our commitment to technical support throughout the project, the SOPREMA Technical Team will monitor the project installation and provide regular installation reports on the progress of the works. Prior to the issue of warranty and Final Inspection will be completed.

SOPREMA WARRANTY

A SINGLE POINT SOPRACOVER WARRANTY is proposed for this project, subject to the works being completed by the SOPREMA Approved Contractor, installed to this specification and signed off by the SOPREMA Technical Department.

SOPREMA manufacture and specify the complete waterproofing and insulation system, meaning that a true single point warranty can be achieved. This differentiates the Soprema offer and provides the client with a market-leading solution from one source. The warranty Soprema offers on our synthetic waterproofing and insulation systems is up to 25 years (subject to build up), and is the most competitive on the market in terms of cost effectiveness vs. performance.

With extensive independent accreditation and certification including BBA, FM, WRAS, ISO 9001 and ISO 14001, in addition to an industry leading warranty offer, SOPREMA guarantee peace of mind for your project.

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J42

Single layer polymeric sheet roof coverings

Types of roof covering

Soprema Specification Notes

1. Section J42 deals with the installation of the Soprema Single Ply Waterproofing System, comprising of synthetic and bituminous membranes laid and jointed using self-adhesive, adhesive and hot air welding application as required.

It includes where required, the air and vapour control layer, thermal insulation, underlayer and capping sheet membranes (root resistant for green roof systems) and presumes the deck substrate and roof falls are as stated within the specification below or in line with the requirements of BS 6229:2018. Accessories are included where relevant.

It is intended for use on projects where the detailed design is completed by the specifier (architect or landscape architect) with technical assistance from the manufacturer as required and should be read in conjunction with any project specific drawings provided.

2. **SCOPE OF WORKS**

This section includes:

- Soprema Single Ply Waterproofing System.
- Related Soprema system accessories
- Thermal insulation that meets the target U Value (U Value calculations should be requested to ensure accuracy).

This section does not include:

- Construction of the structural deck.
- Proprietary rainwater drainage / plumbing
- Green Roof landscaping
- Lead sheet coverings / flashings

110 Warm deck roof covering

1. Substrate: Existing Plywood deck (surveyed to ensure that the condition of the existing roof is suitable to receive the proposed roofing system, meets the standards required within BS 6229:2018 and the [Single Ply Roofing Association Design Guide 2020](#) and where required, graded to the correct falls).
 - 1.1. Preparation: As clause 610
2. Roof covering system: [FLAG by Soprema](#)
 - 2.1. Manufacturer: [Soprema UK](#)
 - 2.2. Contact:
 - Technical Sales Manager: Mark Luke
 - Address: Soprema House, Freebournes Road, Witham, ESSEX CM8 3UN
 - Tel : [0330 058 0668](tel:03300580668) / 07568 430997
 - Mail : info@soprema.co.uk
 - 2.3. Air and vapour control layer: [Vapor Flag](#) as clause 395C
 - 2.4. Insulation: Sopratherm F as clause 420
 - 2.5. Waterproof membrane: Flagon SR DE
 - 2.5.1. Width: 2.1m
 - 2.5.2. Thickness: 1.5 mm, excluding fleece backing
 - 2.5.3. Colour: Lead grey

3. Accessories: Pipe collars as clause 340
Pre formed corners as clause 341
Perimeter trims as clause 345
Termination profile as clause 360
Rainwater outlets as clause 490
Lightning conductor pad as clause 493
4. 3rd party accreditation: BBA Certificate 97/3430 [Product Sheet 1](#) & [Product Sheet 2](#)
5. Warranty: 20 Years

Performance

210 Roof performance

1. Roof covering: Secure, free draining and weathertight.

225 Avoidance of interstitial condensation: Warm and inverted roofs

1. Interstitial condensation within roof construction: Determine risk as recommended in BS 5250 and BS EN ISO 13788.
2. Condensation risk analysis: Contact [Soprema UK Technical Department](#) for calculation requests.
3. Air and vapour control layer: Provide a suitable membrane so that damage and nuisance from interstitial condensation do not occur.

230 Thermal performance

1. Requirement: Determine type and thickness of insulation and integral or separate overlay to satisfy the following criteria:
 - 1.1. Thermal transmittance of the roof (maximum): 0.15 W/m²K
 - 1.2. Compressive strength of insulation (minimum) at 10% compression: 150 kPa
 - 1.3. Finished surface: Suitably even, stable and robust to receive roof covering.
 - 1.4. Insulation compliance: To a relevant European Standard, or Agrément certified.
 - 1.5. Fire:
 - Euroclass E (PIR)

240 System Fire performance

1. Classification: Broof(t4) in accordance with BS EN 13501-5
2. Tested build up: Please consult with [Soprema UK Technical Department](#) for further information

245 Resistance to wind uplift forces

1. Requirement: Determine methods of attachment to resist wind loads. Provide for relative movement of materials and effects of vapour pressure. Do not reduce performance of air and vapour control layer.
2. Wind loads: Calculate to BS EN 1991-1-4, UK National Annex Method.
3. Please consult with [Soprema UK Technical Department](#) for assistance with wind uplift calculations

Products

328 Mechanical fixing of insulation

1. Supplier: [Soprema UK](#)
 - 1.1. Product: Insulation fixings & tube stress plate

2. Application: Follow manufactures installation procedure
3. The length of fixing and rate of frequency is to be determined by the required resistance to wind uplift, assistance can be sort from the supplier or by following the guidance laid out within The Insulation Manufacturers Association (IMA) document ID/1/2009. Please consult the [Soprema UK Technical Department](#) for assistance with Wind Uplift Calculations.

330 Timber trims, etc.

1. Quality: Planed. Free from wane, pitch pockets, decay and insect attack except ambrosia beetle damage.
2. Moisture content at time of covering (maximum): 22%.
3. Preservative treatment: Organic solvent based timber preservatives are not permitted, due to adverse affect on membranes.

340 Preformed pipe collars

1. Type: Conical PVC pipe collar
2. Manufacturer: [Soprema UK](#)
 - 2.1. Product reference: [Flagon PVC Conical Pipe Collar](#)
3. Colour: Lead grey

341 Preformed corners

1. Type: Pre formed internal / external corners
2. Manufacturer: [Soprema UK](#)
 - 2.1. Product reference: [Flagon PVC 90° Internal Corner](#)
<https://www.soprema.co.uk/en/product/waterproofing/synthetic-waterproofing/finishes-corners-pipe-collars/flagon-pvc-conical-pipe-collar>
 - 2.2. Product refernce: [Flagon PVC 90° External Corner](#)
3. Colour: Lead grey

345 Perimeter trims Metal edge trims

1. Type: 0.7mm galvanised steel with unreinforced membrane laminate
2. Manufacturer: [Soprema UK](#)
 - 2.1. Product reference: [Flagon PVC Metal Edge Trim](#)
3. Colour: Lead grey
4. Size: As project requirement

345 Perimeter trims Metal wall flashing

1. Type: 0.7mm galvanised steel with unreinforced membrane laminate
2. Manufacturer: [Soprema UK](#)
 - 2.1. Product reference: [Flagon PVC Metal Wall Trim](#)
3. Colour: Lead grey
4. Size: As project requirement

345 Perimeter trims Metal water stop

1. Type: 0.7mm galvanised steel with unreinforced membrane laminate
2. Manufacturer: [Soprema UK](#)

- 2.1. Product reference: Flagon PVC Metal Water Stop
- 3. Colour: Lead grey
- 4. Size: As project requirement

355 Mechanical fasteners, washers, pressure plates, etc.

- 1. Type: Thermally broken telescopic in high quality polypropylene / steel
 - 1.1. Material:
- 2. Manufacturer: MAK Fasteners
 - 2.1. Product reference:

360 Termination profile

- 1. Type: Linear fastener
 - 1.1. Material: Corrosion-free modified polymer
- 2. Manufacturer: Product of [Soprema UK](#)
 - 2.1. Product reference: Flag Polymer Batten Roll

395 Air and vapour control layer C

- 1. Type: Low density polyethylene membrane
- 2. Manufacturer: [Soprema UK](#)
 - 2.1. Product reference: [Vapor Flag](#)
- 3. Thickness: 0.3mm
- 4. Vapour resistance: 345 MN s/g

400 Waterproof membrane Flagon SR DE

- 1. Type: Polyvinyl chloride (PVC)
- 2. Manufacturer: [Soprema UK](#)
 - 2.1. Product reference: Flagon SR DE <https://www.soprema.co.uk/en/product/waterproofing/synthetic-waterproofing/pvc-waterproofing/membrane-strip/flagon-sb>
- 3. Width: 2,100mm
- 4. Thickness: 1.5mm, excluding fleece backing
- 5. Colour: Lead grey
- 6. Attachment: Mechanically fixed
- 7. Details and flashing: Flagon SR DE
- 8. Guarantee: 20 years

420 Rigid urethane foam warm deck roof insulation C

- 1. Manufacturer: [Soprema UK](#)
 - 1.1. Product reference: Sopratherm F
- 2. Standard: Rigid polyisocyanurate foam (PIR) roofboard to BS 4841-3
 - 2.1. Reaction to fire: Euroclass E
 - 2.2. Thermal conductivity (minimum): 0.022 W/mK
 - 2.3. Tapered system: No

- 2.3.1. Required fall (min. 1:80):: As existing
- 2.4. Thickness: TBC
- 2.5. Target U Value: 0.15 W/mK
- 2.6. Compressive strength (minimum): 150 kPa
- 3. Facing: Foil
- 4. Fixing method: Mechanically fixed

490 Rainwater outlets Drains Straight PVC Alu Flag

- 1. Manufacturer: [Soprema UK](#)
 - 1.1. Product reference: [Drains Straight PVC Alu Flag](#)
- 2. Outlet size: TBC
- 3. Outlet position: Horizontal / Vertical
- 4. Installation:
 - Install the waterproofing membrane and mechanical fix with at least 3 fixings around the cut out of the drain pipe. The fixing plates need to be positioned no less than 30 mm from the perimeter weld.
 - Weld the flange of the [Drains Straight PVC Alu Flag](#) with hot air on to the waterproofing membrane. Ensure the weld is checked prior to completion.
 - Consult the local guidelines concerning the placement and dimensioning of water evacuation.

493 Lightning conductor pad

- 1. Supplier: [Soprema UK](#)
 - 1.1. Product: [Sopralene Lightning Conductor Pad](#)
- 2. Supplied with a 100x100mm PVC flange for connection to the roof deck.

Execution generally

510 Adverse weather

- 1. General: Do not lay membrane at temperatures below 5°C or in wet or damp conditions unless effective temporary cover is provided over working area.
- 2. Unfinished areas of roof: Keep dry and protect edges of laid membrane from wind action.

520 Incomplete work

- 1. End of working day: Provide temporary seal to prevent water infiltration.
- 2. On resumption of work: Cut away tail of membrane from completed area and remove from roof.

560 General Workmanship Requirement

- 1. Installation of the Soprema waterproofing system may only be carried out by trained and certified operatives approved by Soprema and who carry current ID badges. These should be available for inspection at all times.
- 2. Workmanship must comply with Codes of Practice BS 6229:2019 and the guidance set out within the [Single Ply Roofing Association Design Guide 2020](#) (or alternatively Soprema's specification where otherwise stated). Non-compliant workmanship will not be permitted, even if the system is watertight. Any faults must be remedied before the Warranty is issued.

3. All waterproofing materials and system components must be supplied by Soprema, unless otherwise stated. Any sub-standard materials or un-authorised alternatives will be rejected. Any building work which is the responsibility of the roofing contractor and has a bearing on the life of the Soprema waterproofing system must be carried out by properly trained and qualified tradesmen.
4. Any structural damage, peculiarities or details discovered that might affect the performance of the Soprema waterproofing system, should be reported immediately to the client's representative and Soprema in order that they may assist in overcoming the problem.
5. The contractor is to ensure water tightness of the roof at all times. Proper day joints must be formed at the end of each working day to provide a temporary seal. No mopping or loose covers will be permitted.
6. Where building works are to be carried out by other trades, following completion of the waterproofing, the contractor must make adequate provision for supplying protection to prevent damage to the new membranes. The final inspection will not be carried out by the Soprema Field Technician until all associated trades are complete and the roof areas are clear from all debris and protection layers.
7. It is imperative that the Soprema Approved Contractor conforms to the workmanship criteria as listed above. Any deviation will result in the contract being considered unguaranteeable.

565 Health & safety practices

1. Suitable precautions must be taken to prevent accidents occurring when roofing systems are being installed.
2. The contractor must ensure that adequate measures are taken to effectively prevent injury to members of the public, contractors and any other persons who may be affected by the works including the public.
3. Where microwave equipment is installed at roof level, care must be taken to prevent persons working on the roof from being exposed to large doses of microwave radiation.
4. Similarly, the contractor should liaise with the client to ensure that there are no extract outlets situated on the roof where noxious or harmful emissions could affect persons working. Suitable precautions will be necessary to prevent exposure where this situation arises.
5. The contractor is responsible for providing adequate fire fighting equipment in the form of extinguishers during work on the roof. These should be kept in easily accessible locations and be suitably signed.
6. Whenever possible, access to the roof should be made via internal staircases rather than by temporary means. Where this is not available, it is the responsibility of the contractor to ensure a safe means of access, egress and a safe workplace. As far as roofs are concerned, edge protection in the form of scaffolding or a fixed structure should be in place to a height of 1.1 metres in accordance with the Workplace (Health, Safety and Welfare) Regulations 1992.
Failing this, the hierarchy of controls should be applied from the Work at Height Regulations 2005. Means of access should be by fixed ladder, passenger hoist or scaffolding.
7. The contractor must ensure that suitable written method statements and risk assessments are available for the work being undertaken. In particular, it is essential that manual handling methods be fully assessed as roofing materials are heavy and can cause serious injury.
8. The contractor must ensure that suitable information about the roof covering is provided to the Client at the end of the work to ensure that work in future can be carried out safely. This information will form part of the Safety File.
9. All persons working on the roof should be provided with, and wear, suitable personal protective equipment and wet weather gear. Training must be provided to all contract staff on the safe use of the equipment.
10. The installer must observe Product Safety Datasheets, relevant to the materials being used as well as completing and complying with COSHH risk assessments.
11. The Construction Design Management Regulations must also be complied with.

570 Safe2Torch

1. The application of Flag Single Ply Membranes will not usually require the use of a torch. However, consideration to the following area of the 'Safe2Torch' document produced by the National Federation of Roofing Contractors.
2. **Drying substrates:**
Where possible any newly installed roof decking should be protected, and covered from the weather to ensure drying out is not necessary. However, in the event of a roof becoming wet it is important to ensure drying out is done safely.
When there is no alternative to using a gas torch to dry a roof deck, a thorough roof inspection of all fire related risks is essential. Where risks are identified, the operative must adopt a torch-free area in line with the contractor's public liability insurance, however it is recommended that this should be no less than 900 mm.

Substrates/ air and vapour control layers/ warm deck roof insulation

610 Suitability of substrates

1. Surfaces to be covered: Secure, clean, dry, smooth, and free from frost, contaminants, voids and protrusions. The new WPB plywood deck, thickness as specified by client, should be BBA certified, conforming to BS EN 1995 & CPD/CE compliant, fixed directly to either the joists or firings using non corroding ring shank nails or recommended screw fasteners.
2. Falls: Where provided, the falls should be designed to 1:40 to achieve minimum finished falls of 1:80 to comply with drainage requirements of BS 6229:2018 and [Single Ply Roofing Association Design Guide 2020](#). No deflections or back-falls present if the deck is designed to achieve a 0° level finished surface (e.g. when using tapered insulation to provide falls).
3. Preliminary work: Complete, including
 - 3.1. Formation of upstands, kerbs, box gutters, sumps, grooves, chases and expansion joints.
 - 3.2. Fixing of battens, fillets and anchoring plugs/ strips.
4. Moisture content and stability of substrate: Must not impair integrity of roof.
5. Preparation: Any items or defects must be rectified as necessary to eliminate the possibility of puncturing the new waterproofing system. The deck should be clean, dry and sound before the application of primer.

640 Fixing perimeter trims

1. Setting out: 3mm clear from wall or fascia.
2. Fasteners: Type/length appropriate and suitable to particular deck substrate.
3. Fixing centres (maximum): 30mm from ends and at 250mm centres.
4. Jointing:
 - Sleeves: Fixed one side only.
 - Flagon Metal trims: Butt ends and strap.
 - Aluminium trims: 3 mm gaps between ends.
5. Corner pieces: Purpose made.

645 Fixing timber trims

1. Fasteners: Type/length appropriate and suitable to particular deck substrate.
2. Fixing centres (maximum): 500mm

670 Laying air and vapour control layer Vapour Flag

1. Laying: Loose laid, flat and smooth
2. Side and head laps: Minimum overlap of 80 mm, sealed by using [Flag Butyl Tape](#) of minimum 15 mm wide.
3. Penetrations: Fully seal using bonding or taping methods recommended by manufacturer.
4. Edges of insulation at roof edges, abutments, upstands, kerbs, penetrations and the like: Enclosed with vapour control layer:
 - Dressed up sufficiently, providing 80 mm (minimum) seal when overlapped by the roof covering; or
 - Turned back 150 mm (minimum) over the insulation and sealed down.
5. Application: On rough substrates a protection layer must be applied in advance.

680 Laying warm deck roof insulation

1. Setting out
 - 1.1. Long edges: Fully supported and running at right angles to structure.
 - 1.2. End edges: Adequately supported.
 - 1.3. Joints: Butted together.
 - 1.4. End joints: Staggered.
2. Mechanical fixing: As clause 328
3. Protection to exposed edge of insulation: Treated timber hard edge, minimum 150mm wide.
4. Completion: Boards must be in good condition, well fitting and secure.

Waterproof membranes/ accessories

710 Mechanical fixing of waterproof membrane

1. Setting out: Perpendicular to the deck direction
2. Laying: Loose, do not wrinkle or stretch.
3. Installing fasteners
 - 3.1. As detailed in clause 355
 - 3.2. Insertion: Correct and consistent.
4. Washers/ Pressure plates/ Bars
 - 4.1. Distance from fixed edge (minimum): 10 mm.
 - 4.2. Fixing: Flush with membrane.
5. Sheet overlaps: Extend beyond washers/ pressure plates by minimum 50 mm.
6. Surface condition at completion: Fully sealed, smooth, weatherproof and free draining.

730 Welded jointing of waterproof membrane

1. Side and end joints
 - 1.1. Laps (minimum): 80mm (Fully bonded)
 - 1.2. Laps (minimum): 120mm (Mechanically fixed)
 - 1.3. Preparation: Clean and dry surfaces beyond full width of joint.
 - 1.4. Sealing: Weld together using hot air gun with a minimum width of 50mm.
2. Condition at completion: Fully sealed, smooth, weatherproof and free draining.

760 Perimeter of membrane

1. General: Secure membrane at roof edge conditions, changes of plane, curb flashings, upstands to roof lights, etc. with Flag Polymer Batten Strip and suitable mechanical fasteners.

765 Perimeter details for thermoplastic membranes

1. Upstands, edge trims, drips, kerbs, etc.: Secure preformed metal sections to roof structure with mechanical fasteners at 250mm centres.
2. Roof membrane: Dress over perimeter profile. Overlap beyond fasteners by minimum 50 mm.
 - 2.1. Sealing: Weld together.

780 Roof penetrations through thermoplastic membranes

1. Roof membrane: Cut around penetrations and secure to deck (3no. fixings per penetration).
2. Flanged sleeve
 - 2.1. Type: Form from roof membrane complete with base flange.
 - 2.2. Type: Preformed flanged sleeve.
 - 2.3. Installation: Dress over and around penetration.
 - 2.4. Roof membrane overlap to flange (minimum): 80 mm beyond fasteners.
 - 2.5. Minimum upstand height: 150mm from finished roof level.
 - 2.6. Sealing: Weld flange to roof membrane.

Surfacing - Not Used

Completion

910 Inspection

1. Interim and final roof inspections: In accordance with Soprema's requirements for the issue of a guarantee.
2. Notification: It is the responsibility of the approved contractor to advise Soprema UK when the roof is ready for Final Inspection. The 'Final Inspection' of the waterproofing must be carried out and approved by Soprema UK prior to any landscaping products/materials being installed, otherwise a guarantee cannot be issued.
3. Site contact: Steve Morris
Field Technician
Tel: 07540 756508
Email: smorris@soprema.co.uk

940 Completion

1. Roof areas: Clean.
 - 1.1. Outlets: Clear.
2. Work necessary to provide a weathertight finish: Complete.
3. Storage of materials on finished surface: Not permitted.
4. Completed membrane: Do not damage. Protect from traffic and adjacent or high level working.

95o Warranty

1. Following satisfactory Final Inspection by Soprema UK, a 20 year warranty can be applied for. Details regarding the full terms and conditions are available separately from Soprema UK upon request.
2. This system must installed by a Soprema UK Approved Contractor, to be eligible for guarantee.

96o Validity

1. Soprema reserves the right to amend information and product specifications without prior notice. All reasonable care has been taken to ensure that the information is current and correct at the time of issue. Please note that any future regulation changes could result in this specification requiring an update. The specifier is responsible for ensuring that this specification information is still current prior to issue, as Soprema UK can accept no liability for any resulting errors or omissions.

Ω End of Section

