

Supertec P4mm, PA 4mm and PA 4,5kg/m² Roof Waterproofing Systems

Système d'étanchéité pour toitures
Dachabdichtungen

The Irish Agrément Board is designated by Government to issue European Technical Approvals.

Irish Agrément Board Certificates establish proof that the certified products are 'proper materials' suitable for their intended use under Irish site conditions, and in accordance with the **Building Regulations 1997 to 2019**.



PRODUCT DESCRIPTION:

This Certificate relates to Supertec P 4mm, PA 4mm and PA 4,5 kg/m² Roof Waterproof Systems, comprising a range of polyester reinforced, APP modified bitumen membranes.

In the opinion of NSAI the Supertec P 4mm, PA 4mm and PA 4,5 kg/m² Roof Waterproof Systems as described in this Certificate comply with the requirements of the Irish Building Regulations 1997 to 2019.

USE:

This Certificate covers the use of Supertec P 4mm, PA 4mm and PA 4,5 kg/m² roofing membranes as fully bonded or loose-laid and ballasted two layer waterproofing systems on flat roofs with limited access. The Systems are intended for use with substrates in accordance with the BS 8217^[2] and for all normal roofing details such as parapets, outlets and roof lights.

MANUFACTURE AND MARKETING:

The product is manufactured by:

Matco S.r.l.
Via Quadrelli 69,
37055 Roco all'Adige (VR)
Italy.
Tel: 0039 045 6608111
Fax:0039 045 6608177
E-mail: info@matcorl.com
Web: www.matcorl.com

The product is marketed in Ireland by:

Laydex Ltd.
Unit 3 Allied Industrial Estate,
Kylemore Road,
Dublin 10
Tel: (01) 6426600
Fax:(01) 6426601
Email: sales@laydex.ie
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1.1 ASSESSMENT

In the opinion of the Irish Agrément Board (IAB) Supertec P 4mm, PA 4mm and PA 4,5 kg/m² roof waterproofing systems, installed in Ireland by trained, licensed contractors in accordance with processing specifications issued by Matco and used in the context of this Certificate, meet the requirements of the Irish Building Regulations 1997 to 2019 as listed in section 1.2 of this Certificate.

1.2 BUILDING REGULATIONS 1997 to 2019 REQUIREMENT:

Part D – Materials and Workmanship

D3 – Supertec P 4mm, PA 4mm and PA 4,5 kg/m² roofing membranes, as certified in this Irish Agrément Board Certificate, are manufactured from materials which are proper materials fit for their intended use. (See Part 4 of this Irish Agrément Board Certificate).

D1 – Supertec P 4mm, PA 4mm and PA 4,5 kg/m² roof waterproofing systems, used in accordance with this Irish Agrément Board Certificate, can meet the requirements for workmanship.

A1 – Loading

Tests indicate that a roof incorporating Supertec P 4mm, PA 4mm or PA 4,5 kg/m² - roof waterproofing systems can meet the loading requirements, provided the installation complies with the conditions set out in Section 2.6 and Part 3 of this Certificate.

Part B – Fire Safety

Part B Vol 2 – Fire Safety

B4 & B9 – External Fire Spread

Supertec P 4mm, PA 4mm and PA 4,5 kg/m² roof waterproofing systems can meet the requirements for resistance to fire penetration and the distance of spread of flame for roofs, as indicated in Part 4.1 of this Certificate.

Part C – Site Preparation and Resistance to Moisture

C4 – Resistance to Weather and Ground Moisture

Supertec P 4mm, PA 4mm and PA 4,5 kg/m² - Roof waterproofing systems can meet the weather resistant requirements when installed as indicated in Part 2.6 of this Certificate.

Part A – Structure

2.1 PRODUCT DESCRIPTION

Supertec P 4mm, PA 4mm and PA 4,5 kg/m² roofing membranes are manufactured from polyester / glass fibre strand reinforcement coated with APP modified bitumen in accordance with the requirements of I.S. EN 13707^[1]. The lower face of each membrane is covered with a non-sticking HDPE film for heat application, or as an alternative, with a woven non-woven polypropylene mat. The membranes are normally black in colour, but when covered with natural mineral slates they are available in various colours on request.

This certificate covers the use of Supertec P4mm as a cap sheet in loose laid and ballasted applications, while the Supertec PA 4mm and PA 4,5 kg/m² membranes are suitable for use as cap sheets in fully bonded applications

2.2 PRODUCT RANGE

Supertec P 4mm, PA 4mm and PA 4,5 kg/m² - roofing membranes are supplied in rolls to the nominal characteristics given in Table 1.

Table 1: Nominal Characteristic

	Supertec P 4mm	Supertec PA 4mm	Supertec PA 4,5 kg/m ²
Thickness (mm)	4.0 (±5%)	4.0 (±5%) ⁽¹⁾	3.3 (±5%) ⁽¹⁾
Weight (kg/m²)	4.2 (±10%)	5.5 (±15%)	4.5 (±15%)
Roll width (m)	≥ 1.0		
Roll length (m)	≥ 10.0		
⁽¹⁾ Measured at overlap			

2.3 ANCILLARY ITEMS

- Idroprimer – water based bituminous dispersion applied over concrete surfaces in order to enhance adhesion of subsequent layers.
- Acriltec – water based acrylic paint used as a light protection over non self-protected membranes.
- Allutec – Solvent based bituminous aluminium paint used as a light protection over non self protected membranes
- Primertec – solvent based bituminous solution applied over concrete surfaces in order to enhance adhesion of subsequent layers.

The membranes are manufactured by coating a single strand polyester and glass fibre strand carrier with a mix of distilled bitumen - 160/300 modified bitumen with polypropylene polymers in atactic form (APAO) with small amounts of additives..

The upper face of the Supertec P 4mm is treated with inert minerals, or a non-woven material, while the Supertec PA 4mm and Supertec PA 4,5 kg/m² are coated with a layer of natural mineral slate granules.

The lower face of each membrane type is covered with a non-sticking HDPE film for heat application, or as an alternative with a woven non-woven polypropylene mat.

The Supertec range of membranes are manufactured in accordance with the requirements of I.S. EN 13707^[1].

2.4.1 QUALITY CONTROL

Quality control, carried out on the raw materials, during production and on the finished product, includes checks on:

- dimensions
- heat stability
- dimensional stability
- tensile strength
- elongation at break
- cold flexibility
- tear strength
- peel resistance at joints
- adhesion or granules
- position of reinforcement

The management systems of Marco have been assessed and registered as meeting the requirements of ISO 9001^[24].

2.5 DELIVERY, STORAGE AND MARKING

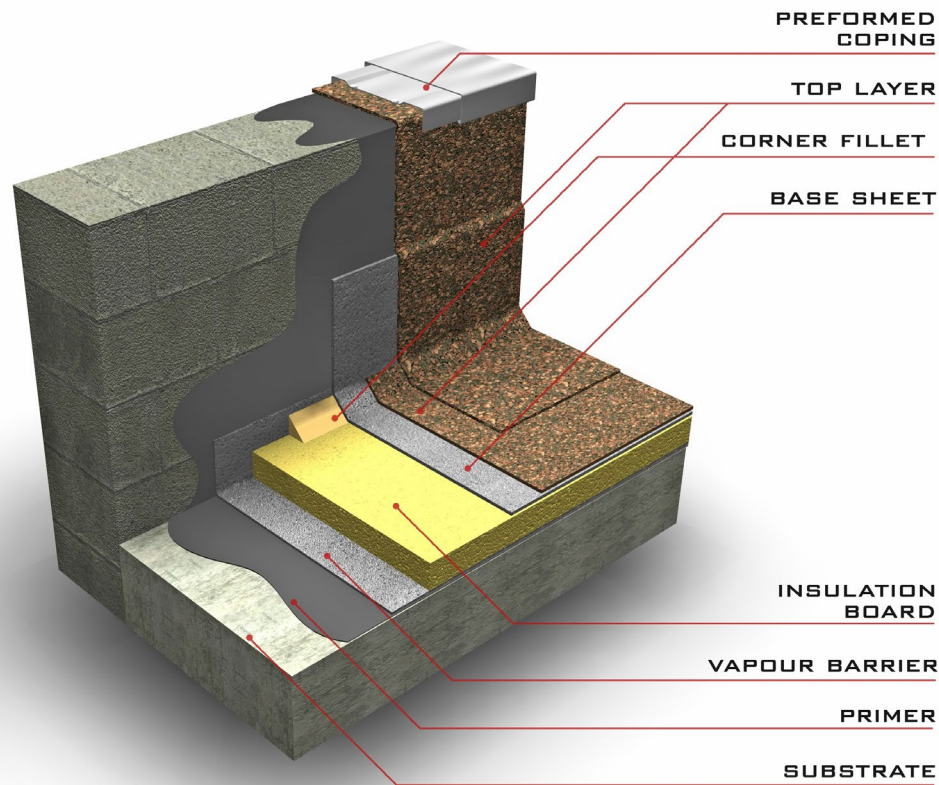
Each roll carries a label which identifies the product name, thickness, dimensions, carrier type, batch number and a barcode. The rolls are stacked vertically on pallets and protected with shrinkage foil.

Rolls should be stored under cover with no more than two pallets stacked on top of each other using wood spacers.

Solvents and sealants must be stored in a dry, sealed area reserved for flammable materials.

2.4 MANUFACTURE

Figure 1 – Parapet Wall with Coping Detail



2.6 DESIGN AND INSTALLATION

2.6.1 General

All installation work must be carried out by trained installers in accordance with the manufacturers installation instructions.

It should be noted that overall responsibility for the structural design for the building, including designing for dead and superimposed loading on the roof, rests with the architectural / engineering design team for the Developer. BS 8747^[4] and I.S. EN 13707^[1] should be used to determine the correct system specification for each project. Older roofs to be retrofitted must be inspected to determine their suitability and any repairs that may be required.

Roof decks to which the covering is applied, must comply with BS 6229^[5]. Supertec P 4mm, PA 4mm and PA 4,5 kg/m² roof waterproofing systems may be laid in conditions normal to roofing work, but should not be laid in rain, snow or heavy fog or at temperatures below +5°C.

Supertec P 4mm, PA 4mm and PA 4,5 kg/m² Roof waterproofing systems should never be laid on a wet substrate.

Surfaces to be covered must be firmly fixed, clean, dry, smooth and free from frost, contaminants, voids and protrusions. All preliminary work including the formation of upstands, kerbs, box gutters, expansion joints, fillets, anchoring, etc. must be complete and satisfactory.

Timber decking must be free from wane, pitch pockets, decay and insect attack. Moisture content of the timber decking must be less than 22% at time of covering.

No petroleum based solvents or other chemicals harmful to bitumen should be allowed to come into contact with the roof surface. Reference should also be made to SR54^[23] for retrofit installations.

2.6.2 INSTALLATION PROCEDURE

Installation of Supertec P 4mm, PA 4mm and PA 4,5 kg/m² roof waterproofing systems is carried out using traditional methods of laying bituminous felts, to meet the requirements of BS 8000-4^[6], BS 8217^[2] and the certificate holders instructions.

It is important that a suitable vapour barrier is used beneath any insulation material to reduce the risk of condensation occurring in the insulation/waterproofing system.

The vapour control layer should be laid with fully bonded 80-100 mm side and 120-150 mm end laps. At all edges, abutments, upstands, kerbs and other penetrations, dress the vapour control sufficiently to provide a minimum 25mm seam when overlapped by the roof covering or turn back a minimum of 150 mm over the insulation and seal down.

All penetrations through the vapour control layer should be sealed using bonding or taping methods as per the certificate holder's instructions.

Insulation materials should comply with the BS 8217^[2] or be the subject of a current NSAI Agrément Certificate. The compatibility of the insulation material and the Supertec membranes should be checked with the Certificate holder.

Insulation boards should be laid with long edges fully supported, lightly butted together with staggered end joints, with mechanical fixing as required to resist wind loading determined in accordance with the requirements of I.S. EN 1991-1-4^[7]

2.6.2.1 Fully-bonded applications

Supertec PA 4mm and PA 4,5 kg/m² membranes have been assessed as meeting the requirements of the Irish Building Regulations 1997 to 2019 for use as cap sheets in fully bonded applications

Where practicable installation should commence on the lowest part of the roof and the membrane unrolled up the slope with side laps of 100mm approx. and end laps of 150mm approx. The sheets must be arranged on the roof in order to avoid the overlapping of more than three sheets at any point, ensuring water will drain over and not into the laps.

Figure 2 - Vent Pipe Penetration Detail

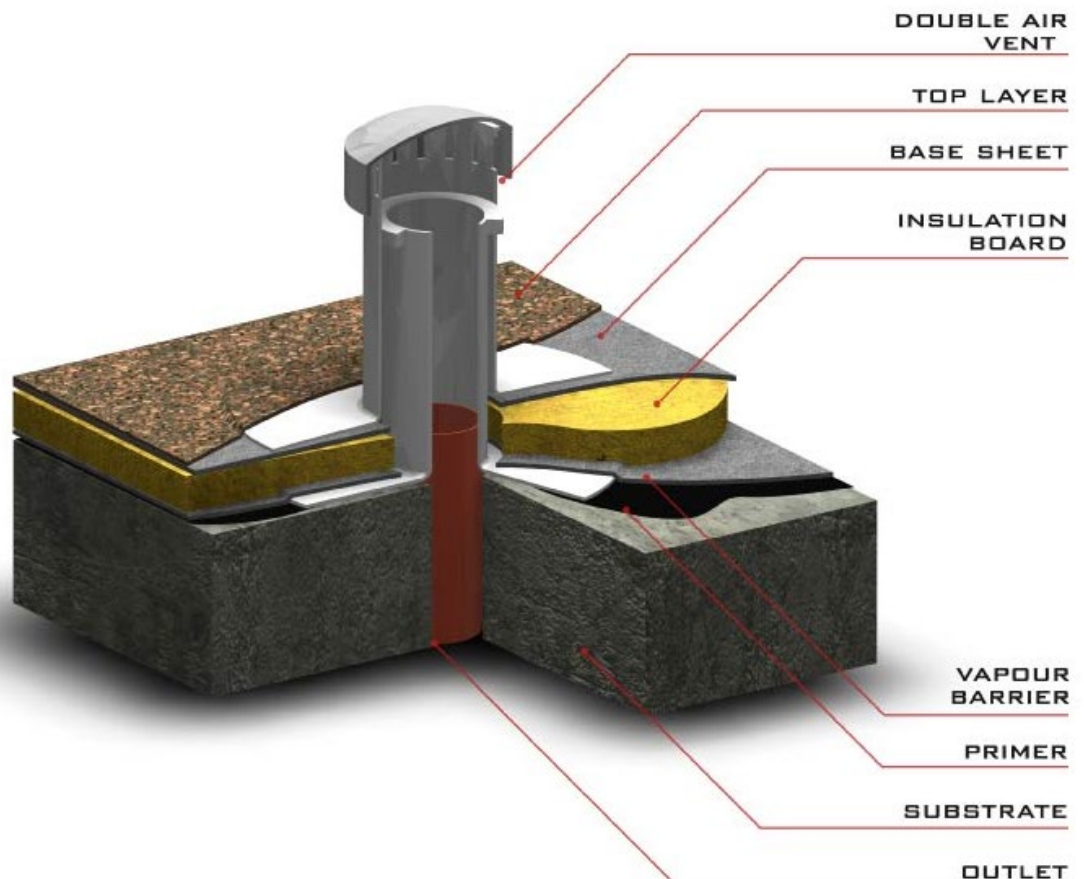
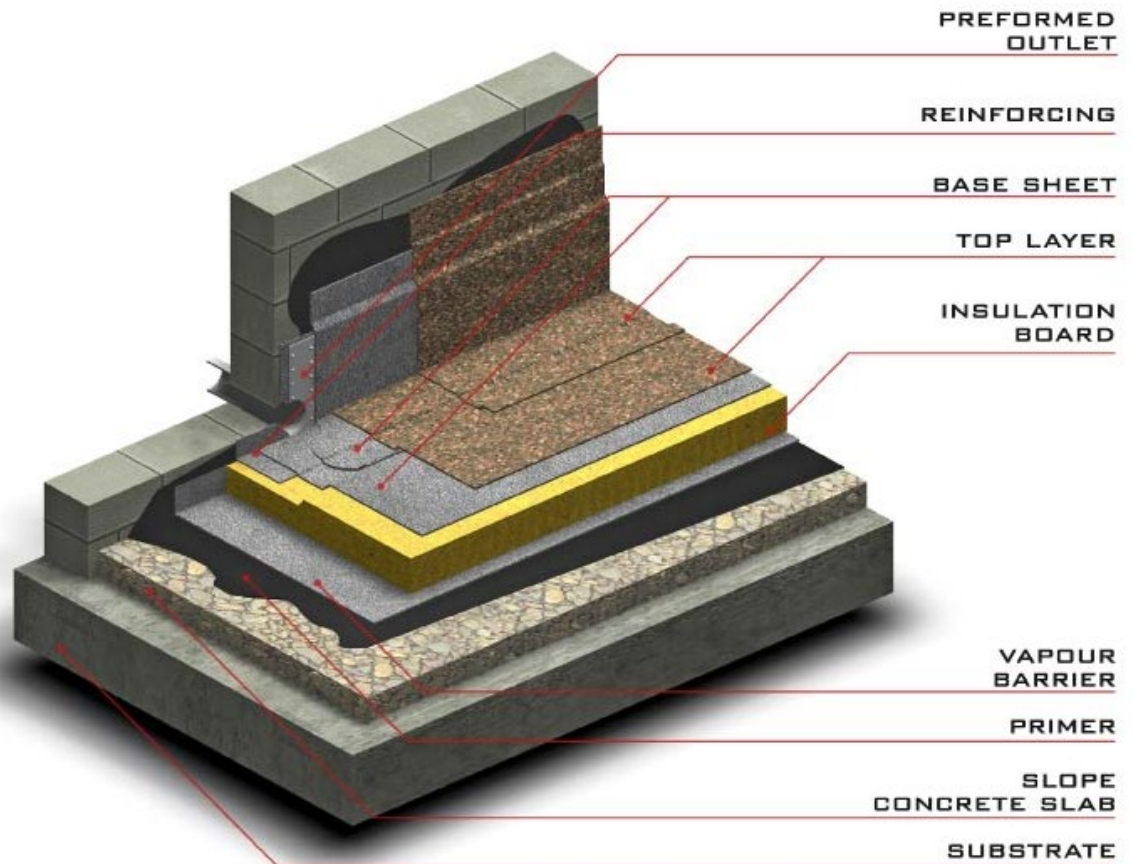


Figure 3 – Rainwater Outlet Detail



Membranes base sheets are bonded to the substrate by heating the waterproofing mass with an appropriate propane gas torch to ensure total adhesion is achieved.

Successive layers should be applied with minimum delay, ensuring that no moisture is trapped. Overlaps are bonded by applying the flame over the total width of the lap with immediate pressure being applied to the seam. In all cases an uninterrupted extrusion of molten material should be visible along the seam.

All subsequent membrane layers are fully-bonded to the previously applied layers ensuring both longitudinal and transversal joints are staggered from the underlay joints as detailed in BS 8217^[2] figure 17.

At vertical edges, or at locations of protrusions in the roof, affected areas must first be primed and have a supplementary strip of membrane applied prior to the application of the final membrane layer.

Detailing at expansion joints, up-stands, roof edges and gutters should be performed in accordance with the requirements of BS 8217^[2] and the certificate holders instructions.

The Supertec P 4mm membrane has been assessed as meeting the requirements of the Irish Building Regulations 1997 to 2019 for use as a cap sheet in loose-laid and ballasted applications.

For loose-laid applications, where the membrane is not adhered to the substrate, a heavy protection must always be applied, normally consisting of:

- A layer of loose laid gravel with a thickness of at least 50mm or a mass $\geq 80\text{kg/m}^2$ (minimum aggregate size 4mm maximum 32 mm).
- Sand/cement screed to a thickness of at least 30mm
- Cast stone or mineral slabs of at least 40mm thickness.

Depending on the application, a separation layer should be installed between the membrane and final ballast coating. The advice of the certificate holder should be sought in this regard. Reference should be made to the requirements of BS 8217^[2] regarding the installation of surface protection.

2.6.2.2 Loose-laid and ballasted applications

- 3.1** Supertec P 4mm, PA 4mm and PA 4,5 kg/m² roof waterproofing systems, when installed in accordance with this certificate and the manufacturers instructions, are suitable for use on insulated decks, concrete, timber or metal decks as a fully bonded, or loose laid and ballasted, double layer waterproofing system on flat roofs with limited access.
- 3.2** Limited access roofs are defined for the purpose of this Certificate as those roofs that are subjected only to pedestrian traffic for maintenance of the roof covering and cleaning of gutters, etc.
- Where traffic is in excess of access loads only, special precautions should be taken to protect the waterproofing membrane by the use of a suitable walkway, as described in BS 8217^[2] clause 8.19
- 3.3** Insulation materials should comply with BS 8217^[2] or be the subject of a current NSAI Agrément Certificate, provided that nothing in the Certificate prevents the use of Supertec P 4mm, PA 4mm and PA 4,5 kg/m² roof waterproofing systems with that product.
- Non-traditional insulation systems or materials used in conjunction with this roofing system must only be used if approved by and in accordance with the certificate holder's instructions.
- 3.4** Timber decking must be free from wane, pitch pockets, decay and insect attack. Moisture content of the timber decking must be less than 22% at time of covering.
- 3.5** Supertec PA 4mm and PA 4,5 kg/m² roofing membranes are also suitable for use where appropriate, as an exposed cap-sheet or in detailed work.
- 3.6** Decks should be designed in accordance with the relevant clauses of BS 6229 or other approved design guides.
- 3.7** Condensation risk should be assessed in accordance with BS 6229^[5] and BS 5250^[8], and only approved vapour barriers should be used. When using a vapour control layer the deck surface should first be primed with PRIMERTEC or IDROPRIMER Primer which should be allowed to dry thoroughly before covering.
- 3.8** Although Supertec P 4mm, PA 4mm and PA 4,5 kg/m² roof waterproofing systems are not affected by standing water, it is good practice to provide suitable falls to facilitate drainage. Where this is not possible additional drainage outlets should be employed.
- 3.9** Flat roofs are defined for the purpose of this Certificate as those roofs up to 10° to the horizontal. See section 4.1 of this certificate for the fire test rating and classification per BS 476^[9]: Part 3 and I.S . EN 13501-5^[10], of a flat roof system using the Supertec PA 4mm roof waterproofing membrane. The designation of other roof systems should be confirmed by test or assessment.
- 3.10** To minimize ponding, and in accordance with BS 6229^[5], it is recommended that flat roofs should have a Design Fall of 1:40 to achieve a Minimum Finished fall of 1:80, unless a detailed analysis of the roof is available, including overall and local deflection and direction of falls.
- 3.11** When fully bonded in accordance with the Certificate holders instructions, the adhesion of Supertec P 4mm, PA 4mm and PA 4,5 kg/m² roofing membranes is sufficient to resist the effects of wind suction, elevated temperatures and thermal shock conditions likely to occur in practice.

4.1 BEHAVIOUR IN FIRE

When tested in accordance with BS 476: Part 3 a roof tested in the flat position comprising:

- 13mm thick chipboard wood deck, Specialtec V 2mm vapour control layer, Recticel Eurothane F TS insulation board (80mm thick Polyurethane insulation +15mm Perlite), Specialtec V 3mm base sheet and Supertec PA 4mm cap sheet

achieved an EXT.F.AA rating.

The above roof system also **achieved a Broof (t4)** classification per I.S EN 13501-5^[10], when evaluated against S.R. CEN/TS 1187^[11]. **The designation of other roof systems should be confirmed by test or assessment.**

When using the Supertec P 4mm membrane where additional protection is to be applied, reference should be made to TGD B, Appendix A, Table A5, and to Commission Decision 2000/553/EC for conditions and surface protections which fulfil the 'external fire performance' requirements of TGD B to the Irish Building Regulations. See Cl. 2.6.2.2 of this Certificate for protections that satisfy this requirement.

4.2 THERMAL INSULATION

Calculations of the thermal transmittance (Uvalue) of specific roof build-ups should be carried out in accordance with I.S.EN ISO 6946^[22] using a thermal conductivity (λ) values of the products used as defined by the certificate holder. The U-value of a construction will depend on the materials used and the design.

For retrofit installations on existing dwellings, guidance should be sought from the certificate holder on achievable U-values as the actual Uvalue of installation will depend on the construction of the existing building elements. Further guidance on thermal performance can be found in SR 54^[23].

Penetrations through the insulation layer should be avoided as they will act as thermal bridges. When penetrations are unavoidable, such as supports to platforms or services, thermal modelling of the junction may be required to ensure internal surface temperatures remain high enough to avoid surface condensation.

4.3 CONDENSATION RISK

The interstitial condensation risk of the roof should be assessed in accordance with BS 6229^[5] and BS 5250^[8] and only approved vapour barriers should be used.

4.3.1 Interstitial Condensation

The risk of interstitial condensation in the roof build-up is dependent on a number of factors including roof design. Reference should be made to BS 6229^[5] and BS 5250^[8].

To avoid the risk of interstitial condensation in cold flat roofs, an AVCL should be provided on the warm side of the insulation and there should be a cross-ventilated void, not less than 50mm deep, between the slab or deck and the insulation. Ventilation openings shall be provided to every roof void along two opposite sides of the roof.

The risk of risk of interstitial condensation in warm flat roofs is dependent on the nature of the supporting structure. As there is a risk of interstitial condensation forming between the thermal insulation and the waterproofing covering, an AVCL with a vapour resistance at least equal to that of the waterproofing covering should be installed immediately above the supporting structure, wrapped and sealed at the perimeter and at all penetrations through the roof covering.

For inverted flat roofs, it is essential that the thermal insulation used resists water absorption and is sufficiently loadbearing to support the protective covering or ballast where used.

When building elements do not follow the principles of BS 5250^[8], a robust hydrothermal assessment to either I.S. EN 15026^[26] or I.S. EN ISO 13788^[27] must be considered.

Care should be taken to provide adequate ventilation, particularly in rooms expected to experience high humidity, and to ensure the integrity of vapour control layers and linings against vapour ingress.

4.3.2 Internal Surface condensation

For retrofit installation, when improving the thermal performance of the external envelope of an existing building, through to upgrading of roof insulation as part of a roof build-up, designers need to consider the impact of these improvements on other untouched elements of the building.

When bridged junctions meet the requirements of TGD Part L, Appendix D table D1, the coldest internal surface temperature will satisfy the requirements of section D2, namely that the temperature factor (fRsi) shall be equal to or greater than 0.75. As a result best practice will have been adopted in order to limit the risk of internal surface condensation which can result in dampness and mould growth.

When site limiting factors give rise to substandard level of insulation at bridged junctions, guidance should be sought from the certificate holder as to acceptable minimum requirements (see clause 4.4 for further guidance).

When insulating buildings, the recommendations of BS 5250^[8] should be followed to minimise the risk of condensation within the building elements and structures.

Roofs will adequately limit the risk of surface condensation where the thermal transmittance (U-value) does not exceed 0.35 W/m² K for roofs at any point, and openings and junctions with other elements are designed in accordance with the DoEHLG publication Limiting Thermal Bridging & Air Infiltration – Acceptable Construction Details (ACD).

4.4 LIMITING THERMAL BRIDGING

The linear thermal transmittance ψ (Psi) describes the heat loss associated with junctions and around openings.

When all building junctions are shown to be equivalent or better than those detailed in the DoEHLG Acceptable Construction Details, then it is acceptable to use the linear thermal transmittance values outline in Table D1 of Appendix D of TGD to Part L of the Building Regulations 1997 to 2019. When all bridged junctions within a building comply with the requirements of Table D1 of appendix D of TGD to Part L, the improved 'y' factor of 0.08 can be entered into the Dwelling Energy Assessment Procedure (DEAP) Building Energy Rating (BER) calculation.

Where either of the above options are shown to be valid, or when the required values cannot be achieved, all relevant details should be recorded for that project for use in future BER calculations.

Ψ -values for other junctions outside the scope of this certificate should be assessed in accordance with the BRE IP1/06 "Assessing the effects of thermal bridging at junctions and around openings" and BRE Report BR 497^[28] in accordance with appendix D of TGD to Part L of the Building Regulations 1997 to 2019.

4.5 VENTILATION

Adequate room and roof ventilation must be provided in accordance with TGD Part F

of the Building Regulations 1997 - 2019, for all installations. This will also limit to potential for Interstitial Condensation Internal Surface as detailed in Cl. 4.3 of this certificate.

In addition a cross-ventilation shall be provided in cold flat roof designs as detailed in Cl. 4.3.1 of this certificate.

4.6 MAINTENANCE

As Supertec P 4mm, PA 4mm and PA 4,5 kg/m² - Roof waterproofing systems have little need for maintenance, however the roofs should be inspected at least one per year to evaluate the effects of extremes of weather as detailed in BS 8217^[2] clause 10. Drainage outlets and gutters should be regularly maintained.

In the event of accidental damage, repair should be carried out by a licensed Matco contractor in accordance with the certificate holder's instructions.

4.5 WEATHERTIGHTNESS

Test data examined by the IAB confirms that Supertec P 4mm, PA 4mm and PA 4,5 kg/m² Roofing membrane and joints, when completely sealed and consolidated, will adequately resist the passage of moisture to the inside of the building. They are capable of accepting minor structural movements without damage and so meet the requirements of Part C of the Building Regulations 1997 to 2019.

4.6 DURABILITY

In the opinion of the NSAI Agrément, when installed in accordance with this Certificate and adequately supported by the substrate, the system's life as a weatherproof covering will be at least 25 to 30 years with continuous inspection and maintenance.

Repairs can be carried out by the procedures listed above and are effective in restoring weather tightness.

4.7 TOXICITY

The membranes are not toxic in normal service.

4.8 SECURITY OF FIXING

Properly fully bonded membranes have bond strengths capable of resisting wind loads. Membranes, being flexible, have good resistance to cyclic movement.

4.9 OTHER INVESTIGATIONS

- (i) Existing data on properties in relation to fire, and durability were assessed.
- (ii) The manufacturing process was examined including methods adopted for quality control

and details were obtained of the quality and composition of the materials used.

- (iii) NSAI Agrément carried out site visits to assess the history of use and practicability of installation of the product.

4.10 CE MARKING

The Certificate holder has taken responsibility of CE marking the roofing membranes in accordance with Harmonised European Standard EN13707^[1]. An asterisk (*) appearing in this Certificate indicates that data shown is given in the manufacturers declaration of performance (DoP). See Table 2. Designers should refer to the latest version of the manufacturers DoP for all essential characteristics.

Table 2: Manufacturers Declared Characteristic Values for Roofing Membranes

Characteristic/Units/EN Standard	Supertec P 4mm	Supertec PA 4mm	Supertec PA 4,5 kg/m ²
Fire Resistance * (See Note 1)	Broof (t4)	Broof (t4)	Broof (t4)
Reaction to Fire * EN13501-1 ^[10]	Euroclass E	Euroclass E	Euroclass E
Watertightness kPa * EN 1928 ^[12]	60	60	60
Max Tensile properties (N.50mm ⁻¹) * - Longitudinal - Traverse EN12311-1 ^[13]	850 750	850 750	850 750
Elongation (%) * - Longitudinal - Traverse EN12311-1 ^[13]	45 45	45 45	40 50
Resistance to Static Puncture: (kg)* EN12730 ^[14]	20	20	20
Dynamic Puncture Resistance * (mm) EN12691 ^[15]	1250	1250	1250
Nail Tear Strength.(N)* - Longitudinal Length - Traverse EN12310-1 ^[16]	200 200	200 200	200 200
Sheer Strength of Joints (N.50mm ⁻¹) * - Longitudinal - Traverse EN12317-1 ^[17]	750 750	750 750	750 750
Cold Flexibility after Aging (°C) * EN 1296 ^[18] + EN1109 ^[20]	-5	-5	-5
Flow Resistance (°C) * EN1110 ^[19]	140	140	140
Flow Resistance after Aging (°C) * EN1296 ^[18] + EN1110 ^[19]	140	140	140
Visible Defects * EN1850 ^[21]	None	None	None
Cold Flexibility (°C) * EN1109 ^[20]	-20	-20	-20
Dangerous substances *	See Note 2	See Note 2	See Note 2

* Values for the membranes essential characteristics are given in the manufacturer's declaration of performance (DoP) against I.S EN 13707:2013. Designers should refer to the latest version of the manufacturers DoP for all essential characteristic values.

Note 1: As per the clients DoP – BRoof (t4) when directly applied onto a substrate of PIR, PUR (faced) EPS + separation fleece, MWR, EPB, CG and PF thermal insulation beforehand applied on a support of (cellular) concrete , profiled steel, wood (like) boards and sandwich panels.

Note 2: In the absence of European harmonized test methods, verification and declaration on release/content has to be done taken into account national provisions in the place of use.

5.1 National Standards Authority of Ireland ("NSAI") following consultation with NSAI Agrément has assessed the performance and method of installation of the product/process and the quality of the materials used in its manufacture and certifies the product/process to be fit for the use for which it is certified provided that it is manufactured, installed, used and maintained in accordance with the descriptions and specifications set out in this Certificate and in accordance with the manufacturer's instructions and usual trade practice. This Certificate shall remain valid for five years from date of issue so long as:

- (a) the specification of the product is unchanged.
- (b) the Building Regulations 1997 to 2019 and any other regulation or standard applicable to the product/process, its use or installation remains unchanged.
- (c) the product continues to be assessed for the quality of its manufacture and marking by NSAI.
- (d) no new information becomes available which in the opinion of the NSAI, would preclude the granting of the Certificate.
- (e) the product or process continues to be manufactured, installed, used and maintained in accordance with the description, specifications and safety recommendations set out in this certificate.
- (f) the registration and/or surveillance fees due to NSAI Agrément are paid.

5.2 The NSAI Agrément mark and certification number may only be used on or in relation to product/processes in respect of which a valid Certificate exists. If the Certificate becomes invalid the Certificate holder must not use the NSAI Agrément mark and certification number and must remove them from the products already marked.

5.3 In granting Certification, the NSAI makes no representation as to;

- (a) the absence or presence of patent rights subsisting in the product/process; or
- (b) the legal right of the Certificate holder to market, install or maintain the product/process; or
- (c) whether individual products have been manufactured or installed by the Certificate holder in accordance with the descriptions and specifications set out in this Certificate.

5.4 This Certificate does not comprise installation instructions and does not replace the manufacturer's directions or any professional or trade advice relating to use and installation which may be appropriate.

5.5 Any recommendations contained in this Certificate relating to the safe use of the certified product/process are preconditions to the validity of the Certificate. However the NSAI does not certify that the manufacture or installation of the certified product or process in accordance with the descriptions and specifications set out in this Certificate will satisfy the requirements of the Safety, Health and Welfare at Work Act 2005, or of any other current or future common law duty of care owed by the manufacturer or by the Certificate holder.

5.6 The NSAI is not responsible to any person or body for loss or damage including personal injury arising as a direct or indirect result of the use of this product or process.

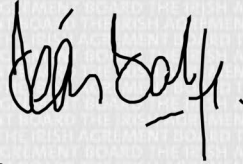
5.7 Where reference is made in this Certificate to any Act of the Oireachtas, Regulation made thereunder, Statutory Instrument, Code of Practice, National Standards, manufacturer's instructions, or similar publication, it shall be construed as reference to such publication in the form in which it is in force at the date of this Certification.

The Irish Agrément Board

This Certificate No. **07/0294** is accordingly granted by the NSAI to **Matco S.p.I.** on behalf of The Irish Agrément Board.

Date of Issue: **December 2007**

Signed



Seán Balfe
Director of NSAI Agrément

Readers may check that the status of this Certificate has not changed by contacting NSAI Agrément, NSAI, 1 Swift Square, Northwood, Santry, Dublin 9, Ireland. Telephone: (01) 807 3800. Fax: (01) 807 3842. www.n sai.ie

Revisions:

February 2013: To include revised cold flexibility data for the Supertec product range.

03rd June 2021: To revise Certificate holders name change and other general updates.

Bibliography

- [1] I.S. EN 13707:2013: *Flexible sheets for waterproofing - Reinforced bitumen sheets for roof waterproofing - Definitions and characteristics.*
- [2] BS 8217:2005 *Code of practice for Reinforced bitumen membranes for roofing.*
- [3] I.S. EN ISO 9001:2015: *Quality Management Systems – Requirements.*
- [4] BS 8747:2007: *Reinforced bitumen membranes (RBMs) for roofing – Guide to selection and specification.*
- [5] BS 6229:2018 *Code of practice for flat roofs with continuously supported coverings.*
- [6] BS 8000-0:2014: *Workmanship on Construction Sites – Introduction and general principles.*
- [7] I.S. EN 1991-1-4: 2005+A1:2010: *Actions on Structures. Wind Action.*
- [8] BS 5250:2011+A1:2016: *Code of practice for control of condensation in buildings.*
- [9] 476: Part 3:2012: *Fire tests on building materials and structures – Classification and method of test for external fire exposure to roofs.*
- [10] EN 13501-5: 2016: *Fire classification of constructional products and building elements, Part 5 - Classification using data from external fire exposure to roof tests.*
- [11] S.R. CEN/TS 1187: 2012: *Test method for external fire.*
- [12] EN1928:2000: *Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of watertightness.*
- [13] EN 12311-1: 2000: *Flexible sheets for waterproofing - Part 1: Bitumen sheets for roof waterproofing -Determination of tensile properties.*
- [14] EN12730:2015: *Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of resistance to static loading.*
- [15] EN12691:2018: *Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of resistance to impact.*
- [16] EN 12310-1:2000: *Flexible sheets for waterproofing - Part 1: Bitumen sheets for waterproofing - Determination of resistance to tearing (nail shank).*
- [17] EN 12317-1:2000: *Flexible sheets for waterproofing - Part 1: Bitumen sheets for roof waterproofing -Determination of shear resistance of joints.*
- [18] EN1296:2000: *Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roofing - Method of artificial ageing by long term exposure to elevated temperature.*
- [19] EN1110:2010: *Flexible sheets for waterproofing - Bitumen sheets for roof waterproofing - Determination of flow resistance at elevated temperature.*
- [20] EN1109:2013: *Flexible sheets for waterproofing - Bitumen sheets for roof waterproofing - Determination of flexibility at low temperature.*
- [21] EN1850-1:2000: *Flexible sheets for waterproofing - Determination of visible defects - Part 1: Bitumen sheets for roof waterproofing.*
- [22] IS EN ISO 6946:2017: *Building components and building elements – Thermal resistance and thermal transmittance – Calculation method.*
- [23] SR 54:2014 & A1:2019: *Code of Practice for the energy efficient retrofit of dwellings.*
- [24] I.S. EN ISO 9001:2015: *Quality Management Systems – Requirements.*
- [25] BRE Report BR 497: 2016: *Conventions for calculating linear thermal transmittance and temperature factors.*
- [26] I.S. EN 15026:2007: *Hygrothermal Performance Of Building Components And Building Elements - Assessment Of Moisture Transfer By Numerical Simulation.*
- [27] I.S. EN ISO 13788: 2012: *Hygrothermal performance of building components and building elements - internal surface temperature to avoid critical surface humidity and interstitial condensation - calculation methods*