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BBA APPROVAL INSPECTION TESTING CERTIFICATION
TECHNICAL APPROVALS FOR CONSTRUCTION

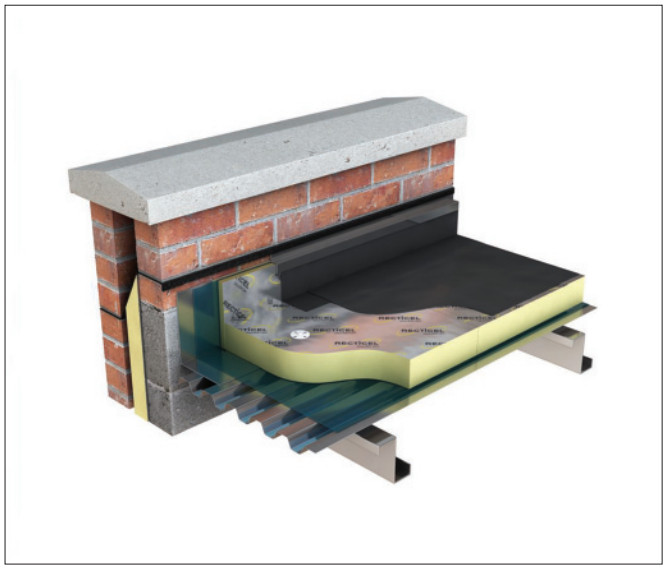
Agrément Certificate
95/3113
Product Sheet 2

RECTICEL INSULATION

EUROTHANE EURODECK

This Agrément Certificate Product Sheet(1) relates to Eurothane Eurodeck, a rigid thermoset polyisocyanurate foil-faced insulation for use as a thermal insulation layer on limited access concrete, metal or timber flat roof decks. It is for use in conjunction with a vapour control layer and a single ply mechanically fixed roof waterproofing membrane in domestic and non-domestic buildings.

(1) Hereinafter referred to as 'Certificate'.



CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.

KEY FACTORS ASSESSED

Thermal performance — the product has a declared thermal conductivity* ($\lambda_{90/90}$ *value*) of 0.022 $W \cdot m^{-1} \cdot K^{-1}$ (see section 6).

Condensation risk — the product can contribute to limiting the risk of surface condensation (see section 7).

Strength and stability — when installed on suitable substrates using appropriate fixings, the product can adequately transfer maintenance traffic loads and wind loads to the roof deck (see section 8).

Behaviour in relation to fire — the fire rating of any roof containing the product will depend on the type of deck and the nature of the roof waterproof covering (see section 9).

Durability — the product, when used as thermal insulation in the roof system described in this Certificate, will have a life at least as long as that of a roof waterproofing covering (see section 11).

The BBA has awarded this Certificate to the company named above for the product/system described herein. This product/system has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of First issue: 20 August 2012

Sean Moriarty — Head of Approvals
Energy and Ventilation

Greg Cooper
Chief Executive

The BBA is a UKAS accredited certification body — Number 113. The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk

Readers are advised to check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA direct.

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Regulations

In the opinion of the BBA, Eurothane Eurodeck, if installed, used and maintained in accordance with this Certificate, will meet or contribute to meeting the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):

The Building Regulations 2010 (England and Wales)

Requirement:	A1	Loading
Comment:		The product is acceptable. See section 8.1 of this Certificate.
Requirement:	B4(2)	External fire spread
Comment:		Roofs incorporating the product can meet this Requirement. See section 9.2 of this Certificate.
Requirement:	C2(c)	Resistance to moisture
Comment:		The product will contribute to a roof meeting this Requirement. See sections 7.1 and 7.4 of this Certificate.
Requirement:	L1(a)(i)	Conservation of fuel and power
Comment:		The product can meet or contribute to a roof meeting this Requirement. See sections 6.2 and 6.3 of this Certificate.
Requirement:	Regulation 7	Materials and workmanship
Comment:		The product is an acceptable material. See section 11 and the *Installation* part of this Certificate.

The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)	Fitness and durability of materials and workmanship
Comment:		The product can contribute to a construction satisfying this Regulation. See section 11 and the *Installation* part of this Certificate.
Regulation:	9	Building Standards — construction
Standard:	1.1	Structure
Comment:		The product is acceptable, with reference to clauses 1.1.1[(1)(2)], 1.1.2[(1)(2)] and 1.1.3[(1)(2)]. See section 8.1 of this Certificate.
Standard:	2.8	Spread from neighbouring buildings
Comment:		Roofs incorporating the product can meet this Standard, with reference to clauses 2.8.1[(1)(2)]. See section 9.2 of this Certificate.
Standard:	3.15	Condensation
Comment:		The product will contribute to a roof meeting this Standard, with reference to clauses 3.15.1[(1)(2)], 3.15.3[(1)(2)], 3.15.4[(1)(2)], 3.15.5[(1)(2)] and 3.15.6[(1)(2)]. See sections 7.1 and 7.5 of this Certificate.
Standard:	6.1(b)	Carbon dioxide emissions
Standard:	6.2	Building insulation envelope
Comment:		The product can contribute to satisfying the requirements of these Standards, with reference to clauses, or parts of 6.1.2[(2)], 6.1.6[(1)], 6.2.1[(1)(2)], 6.2.3[(1)], 6.2.4[(2)], 6.2.5[(2)], 6.2.6[(1)], 6.2.7[(1)], 6.2.8[(1)(2)], 6.2.9[(1)(2)], 6.2.10[(1)(2)], 6.2.11[(1)(2)], 6.2.12[(2)] and 6.2.13[(1)(2)]. See sections 6.2 and 6.3 of this Certificate.
Standard:	7.1(a)(b)	Statement of sustainability
Comment:		The product can contribute to meeting the relevant requirements of Regulation 9, Standards 1 to 6 and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard. In addition, the product can contribute to a construction meeting a higher level of sustainability as defined in this Standard, with reference to clauses 7.1.4[(1)(2)] [Aspects 1[(1)(2)] and 2[(1)]], 7.1.6[(1)(2)] [Aspects 1[(1)(2)] and 2[(1)]] and 7.1.7[(1)(2)] [Aspect 1[(1)(2)]]. See section 6.2 of this Certificate.
Regulation:	12	Building standards — conversions
Comment:		Comments made in relation to the product under Regulation 9, Standards 1 to 6 also apply to this Regulation, with reference to clause 0.12.1[(1)(2)] and Schedule 6[(1)(2)].

(1) Technical Handbook (Domestic).
(2) Technical Handbook (Non-Domestic).

The Building Regulations (Northern Ireland) 2000 (as amended)

Regulation:	B2	Fitness of materials and workmanship
Comment:		The product is acceptable. See section 11 and the *Installation* section of this Certificate.
Regulation:	C5	Condensation
Comment:		The product will contribute to a roof meeting this Regulation. See section 7.1 of this Certificate.
Regulation:	D1	Stability
Comment:		The product is acceptable. See section 8.1 of this Certificate.
Regulation:	E5(b)	External fire spread
Comment:		Roofs incorporating the product can meet this Regulation. See section 9.2 of this Certificate.
Regulation:	F2(a)(i)	Conservation measures
Regulation:	F3(2)	Target carbon dioxide Emissions Rate
Comment:		Roofs incorporating the product can satisfy or contribute to satisfying this Regulation. See sections 6.2 and 6.3 of this Certificate.

Construction (Design and Management) Regulations (Northern Ireland) 2007

Information in this Certificate may assist the client, CDM co-ordinator, designer and contractors to address their obligations under these Regulations.

See section: 3 *Delivery and site handling* (3.3) of this Certificate.

Additional Information

NHBC Standards 2011

NHBC accepts the use of Eurothane Eurodeck, provided it is installed, used and maintained in accordance with this Certificate, in relation to *NHBC Standards*, Chapter 7.1 *Flat roofs and balconies*.

CE marking

The Certificate holder has taken the responsibility of CE marking the product in accordance with harmonised European Standard BS EN 13165 : 2008. An asterisk (*) appearing in this Certificate indicates that data shown is given in the manufacturer's Declaration of Performance.

Technical Specification

1 Description

1.1 Eurothane Eurodeck is a rigid-thermoset polyisocyanurate insulation board manufactured using CFC/HCFC free materials, incorporating composite foil-facings on both sides.

1.2 The product has the nominal characteristics as shown in Table 1.

Table 1 Nominal characteristics

Length* and width* (mm)	1200 x 1200 or 2400 x 1200
Thickness* (mm)	30 to 160 (in 5 mm increments)
Compressive strength at 10% compression (kPa)	150
Edge profile	Square

1.3 Quality control checks are carried out during the manufacturing process and on finished product.

1.4 The product is installed as part of a roof system in conjunction with the following items:

- mechanically fixed single-ply roof waterproofing membrane
- vapour control layer (VCL)
- fixings — incorporating a countersunk washer.

2 Manufacture

2.1 Raw materials are injected onto the lower foil-facer on a conveyor belt. The exothermic reaction expands the foam, which then comes into contact with the upper foil facer. An automated process cures and cuts the product to the required size.

2.2 As part of the assessment and ongoing surveillance of product quality, the BBA has:

- agreed with the manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of non conformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

2.3 The management system of Recticel Insulation Products has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2008 by Lloyd's Register Quality Assurance [Certificate (ANT951267.1)].

3 Delivery and site handling

3.1 The product is delivered to site shrink-wrapped in polythene packs containing a label with the product description and characteristics, the manufacturer's name, and the BBA identification mark incorporating the number of this Certificate.

3.2 It is essential that the product is stored such that it is raised off the ground, is inside or under cover on a flat, dry, level surface in a well-ventilated area. The product must be protected from rain, snow and prolonged exposure to sunlight. If the product has been allowed to get wet or is damaged, it must not be used. Nothing should be stored on top of product.

3.3 The product must not be exposed to a naked flame or other ignition sources. The product must not be exposed to solvents or other chemicals.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Eurothane Eurodeck.

Design Considerations

4 General

4.1 Eurothane Eurodeck is suitable for use as a thermal insulation layer on concrete, metal or timber flat roofs, with access limited to maintenance only.

4.2 Decks should be designed in accordance with the relevant clauses of either BS 6229 : 2003 or BS 8217 : 2005 and, where appropriate, the *NHBC Standards* 2011, Chapter 7.1, Section 4.

4.3 Roofs should incorporate an effective VCL below the product.

4.4 The product is for use with mechanically fixed single-ply waterproofing membranes, such as PVC, CSM, CPE, FPO (including TPO), VEA, PIB and EPDM, which are the subject of a current Agrément Certificate, laid in accordance with, and within, the limitations imposed by that Certificate.

4.5 Limited access roofs are defined for the purpose of this Certificate as those roofs subject only to pedestrian traffic for maintenance of the roof covering and cleaning of gutters, etc (see also section 8.11).

4.6 Flat roofs are defined for the purpose of this Certificate as those roofs having a minimum finished fall of 1:80 and a maximum 1:6 as defined in BS 6229 : 2003.

4.7 For design purposes on flat roofs, twice the minimum finished fall should be assumed, unless a detailed analysis of the roof is available, including overall and local deflections, direction of falls etc.

4.8 The product has not been assessed for use with built-up bitumen based roofing or mastic asphalt systems.

5 Practicability of installation

The product is designed to be installed by a competent general builder, or a contractor, experienced with this type of product.

6 Thermal performance

6.1 Calculations of thermal transmittance (U value), should be carried out in accordance with BS EN ISO 6946 : 2007 and BRE Report (BR 443 : 2006) *Conventions for U-value calculations*, using a declared thermal conductivity* ($\lambda_{90/90}$ *value*) of 0.022 $W \cdot m^{-1} \cdot K^{-1}$.

6.2 The U value of a completed roof will depend on the thickness of insulation used, the number and type of fixings and the insulating value of other roof components/layers. Example U values of roofs incorporating the product are shown in Table 2.

Table 2 Example U values for constructions with galvanized steel fixings

Insulation thickness[1] (mm)			U value ($W \cdot m^{-2} \cdot K^{-1}$)
Concrete[2][3]	Timber[2][4]	Metal[2][5]	
—	155	—	0.15
160	145	160	0.16
140	130	140	0.18
125	115	130	0.20
100	90	105	0.25

(1) Nearest available thickness.
(2) Includes 2.77 galvanized steel insulation fixings per m^2 and 3.55 galvanized steel waterproofing fixings per m^2, with a 4.8 mm cross sectional diameter.
(3) 150 mm concrete decking 2.0 $W \cdot m^{-1} \cdot K^{-1}$, VCL, 1.5 mm waterproofing membrane.
(4) 12.5 mm plasterboard, 150 mm timber joists (12.5%)/air cavity (87.5%), 18 mm plywood decking, VCL, 1.5 mm waterproofing membrane.
(5) Metal deck (not included in calculation), VCL, 1.5 mm waterproofing membrane.

6.3 The product can contribute to maintaining continuity of thermal insulation at junctions between elements and openings. For Accredited Construction Details the corresponding psi values in BRE Information Paper IP 1/06 *Assessing the effects of thermal bridging at junctions and around openings*, Table 3 may be used in carbon emission calculations in Scotland and Northern Ireland. Detailed guidance for other junctions and on limiting heat loss by air infiltration can be found in:

England and Wales — Approved Documents to Part L and for new thermal elements to existing buildings, Accredited Construction Details (version 1.0). See also SAP 2009 Appendix K and the *iSBEM User Manual* for new-build

Scotland — Accredited Construction Details (Scotland)

Northern Ireland — Accredited Construction Details (version 1.0).

7 Condensation risk

Interstitial condensation

7.1 Roofs will adequately limit the risk of interstitial condensation when they are designed and constructed in accordance with BS 5250 : 2011, Annex D and Annex H and BRE Report (BR 262 : 2002) *Thermal insulation: avoiding risks* in England and Wales.

7.2 For the purposes of assessing the risk of interstitial condensation, the insulation core vapour resistivity may be taken as approximately 300 $MN \cdot s \cdot g^{-1} \cdot m^{-1}$ and a resistance value of 4000 $MN \cdot s \cdot g^{-1}$ for each foil-facing.

7.3 To minimise moisture entering the roof an effective VCL such as 0.25 mm minimum thickness polyethylene should be used with sealed and lapped joints and be turned up around the insulation and bonded to the weatherproofing finish.

Surface condensation

7.4 Roofs will adequately limit the risk of surface condensation when the thermal transmittance (U value) does not exceed 0.35 $W \cdot m^{-2} \cdot K^{-1}$ at any point and the junctions with other elements are designed in accordance with section 6.3.

7.5 Roofs will adequately limit the risk of surface condensation when the thermal transmittance (U value) does not exceed 1.2 $W \cdot m^{-2} \cdot K^{-1}$ at any point. Guidance may be obtained from BS 5250 : 2011, Annex H, or section 6.3 of this Certificate. Additional information can be found in BRE Report (BR 262 : 2002).

8 Strength and stability

8.1 When installed on suitable flat roof decks, using appropriate fixings, the product can adequately transfer maintenance traffic loads and negative and positive (suction and pressure) wind loads to the roof deck.

8.2 The roof construction or immediate substrate to which the product is fixed must be structurally sound and have sufficient strength and stability, to resist all dead, imposed and wind loads.

8.3 The suitability of the roof construction, and in particular the immediate substrate, for any specified mechanical fixings must be established before installation by carrying out in-situ pull-out and pull-through testing to determine the minimum safe working load the fixings can resist. The advice of the Certificate holder should also be sought in respect of suitable mechanical fixings.

8.4 The type and number of fixings will depend on the roof construction and location; the Certificate holder's advice should be sought. The Certificate holder recommends a minimum number of fixings per product size, see section 13.4.

8.5 All design analysis must be in accordance with British or European Standards relevant to the construction. The requirement for fixings to suit the wind uplift requirements for the particular site should be assessed in accordance with BS 6399-2 : 1997 or BS EN 1991-1-4 : 2005. All calculations should be carried out by a suitably qualified Engineer.

8.6 Each fixing must incorporate a head or washer which is a minimum of 50 mm diameter if round or 50 mm by 50 mm if square. Location of fixings installed along the edges or at corners of the product are shown in Figures 1 and 2.

8.7 Roof waterproof covering systems (see section 4.4 for suitable types) must be applied in accordance with the relevant Agrément Certificates or manufacturers guidance.

8.8 For design purposes, the product may be assumed to have an allowable compressive strength of 150 kPa at 10% compression.

8.9 The product has not been assessed for use with permanent distributed or concentrated loads, such as air conditioning units, mechanical plants, water tanks, etc. Such loads should be supported directly on the roof construction. The product is not suitable when permanent roof access is required.

8.10 When profiled decking is used, the product will need to span across the ribs. Maximum permissible spans between ribs for product thicknesses are shown in Table 3.

Table 3 Maximum clear span

Maximum clear span (mm)		Minimum roofboard thickness (mm)
< 75		25
> 75	≤ 100	30
> 100	≤ 125	35
> 125	≤ 150	40
> 150	≤ 175	45
> 175	≤ 200	50
> 200	≤ 225	55
> 225	≤ 250	60

8.11 When maintenance is required to the roof waterproofing, protective boarding should be laid over the roof surface to avoid concentrations of load.

9 Behaviour in relation to fire

9.1 The fire rating of any roof containing the product will depend on the type of deck and the nature of the roof waterproof covering.

9.2 When tested in accordance with BS 476-3 : 2004 and ENV 1187 : 2002, a system comprising 18 mm plywood deck, a polythene VCL, a 120 mm thick insulation board and a layer of 1.2 mm Armourplan P PVC membrane mechanically fastened, achieved an EXT.F.AC and B_{roof}(t4) (Low vulnerability in Scotland) rating respectively and is acceptable less than 6 m from a relevant boundary.

9.3 The designation of other specifications, eg when used on combustible substrates, should be confirmed by:

England and Wales — test or assessment in accordance with Approved Document B, Volumes 1 and 2, Appendix A, Clause 6

Scotland — test to conform to clauses 2.C(1) and 2.F(2)

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

Northern Ireland — test or assessment by a UKAS accredited laboratory, or an independent consultant with appropriate experience.

10 Maintenance

The product, once installed does not require any regular maintenance and has suitable durability provided the roof waterproof layers are inspected and maintained at regular intervals (see section 11), therefore, maintenance is not required.

11 Durability

The product is rot-resistant and durable, and will have a life at least as long as that of the roof waterproof covering.

Installation

12 General

12.1 Eurothane Eurodeck must be installed in accordance with the Certificate holder's instructions and BS 6229 : 2003, BS 8217 : 2005, or the relevant Agrément Certificate, depending on the waterproofing to be applied.

12.2 Care should be taken to ensure the deck is graded to the correct fall, is dry, clean and free from any projections or gaps.

12.3 The suitability of the substrate to accept and retain mechanical fixings must be checked prior to work commencing.

12.4 The deck to which the VCL is to be applied must be level, dry, sound, and if bonded, free from dust and grease and other defects which may impair the bond.

12.5 On multi-storey buildings or in areas subject to high wind loads, additional mechanical fixings may be required and the advice of the Certificate holder should be sought on any limitations of use.

12.6 The mechanical fixing frequency and pattern should be predetermined in accordance with the Certificate holder's instructions and the relevant clauses of BS 6399-2 : 1997 or BS EN 1991-1-4 : 2005. Each fixing should incorporate a minimum of 50 mm diameter circular plate countersunk washer or a 50 mm by 50 mm square washer, which must not restrain more than one board.

12.7 To prevent moisture being trapped on, or in the insulation boards, it is essential to:

- protect the product during laying, before the application of the roof waterproofing, or to lay the roof covering at the same time as laying the product. However if the product is accidentally wetted, it must be replaced
- the product should be installed only when the ambient temperature is above 5°C to prevent condensation.

12.8 The product can be cut with a sharp knife or fine-toothed saw to fit around projections through the roof.

12.9 The product is for use with the waterproofing membranes specified in section 4.4, that are subject of a current Agrément Certificate laid in accordance with, and within, the limitations imposed by that Certificate.

12.10 Once installed, access to the roof should be restricted in accordance with section 4.5.

13 Procedure

General

13.1 The number of mechanical fixings required to fix the product will vary depending on the geographical location of the building, the topographical data, and height and width of the roof concerned etc.

13.2 The requirements for an additional number of fixings above those specified in section 13.4 should be assessed in accordance with BS 6399-2 : 1997 or BS EN 1991-1-4 : 2005.

Concrete, metal and timber decks

13.3 A 0.25 mm thick polythene VCL should be laid, with 150 mm sealed laps. The VCL should be turned up around the insulation and sealed to the waterproof finish at all edges and penetrations such as roof lights. Advice may be sought from the Certificate holder.

13.4 The product is laid over the VCL in a brick-bonded pattern. On profiled metal decks, the long edges of the product should be laid at right angles to the ribs and all product ends must be fully supported on a rib. The product is secured to the deck with a minimum of four or six mechanical fixings placed within the individual product area (1200 mm by 1200 mm) and (2400 mm by 1200 mm) respectively, and are sited from all edges as shown in Figures 1 and 2. Countersunk washers with square or circular plates of at least 50 mm by 50 mm or 50 mm diameter should be used with each fixing.

Figure 1 Fixing layout for 1200 mm by 1200 mm board — minimum fixing numbers

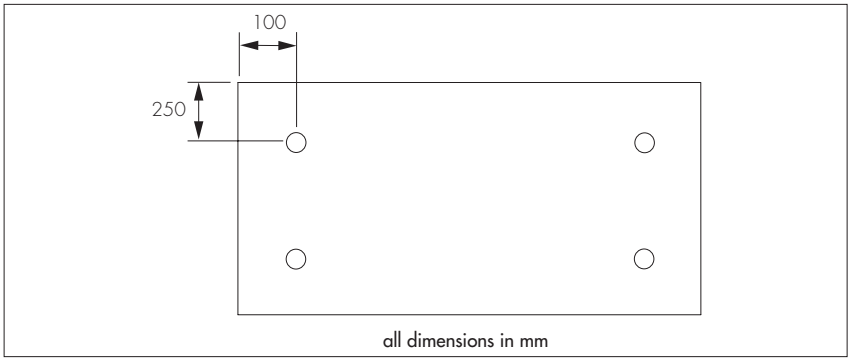
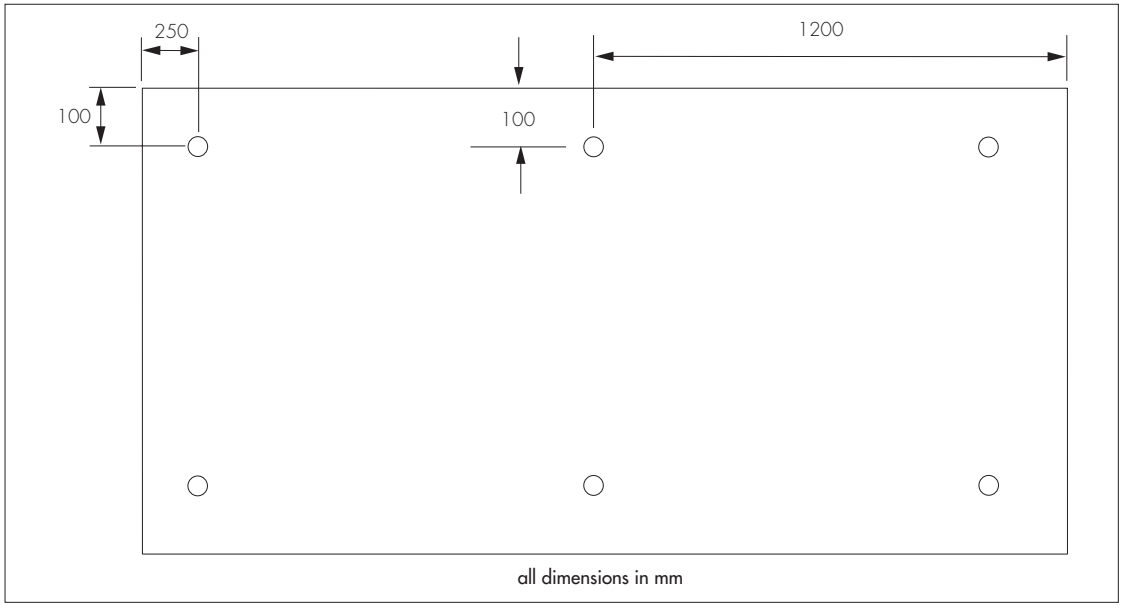


Figure 2 Fixing layout for 2400 mm by 1200 mm board — minimum fixing numbers



13.5 A single-ply membrane is mechanically fixed to the deck through the product, with joints overlapped prior to sealing of the joint, in accordance with the manufacturer's instructions and the relevant Agrément Certificate.

Technical Investigations

14 Tests

Tests were carried out by the BBA on Eurothane Eurodeck and the results assessed to determine:

- behaviour under variations in temperature (unrestrained)
- behaviour under distributed load and increased temperature
- effect of concentrated load on cantilevered parts
- effect of concentrated load under a free span
- bowing under the effect of a thermal gradient
- tensile strength perpendicular to faces
- compressive strength
- water vapour transmission
- thermal conductivity (fresh and aged)
- dimensional stability.

15 Investigations

15.1 An assessment was made of the results of test data relating to:

- fire rating

15.2 An assessment of the risk of interstitial condensation was made.

15.3 An assessment was made of typical constructions which achieve the design U values.

Bibliography

BS 476-3 : 2004 *Fire tests on building materials and structures — Classification and method of test for external fire exposure to roofs*

BS 5250 : 2011 *Code of practice for control of condensation in buildings*

BS 6229 : 2003 *Flat roofs with continuously supported coverings — Code of practice*

BS 6399-2 : 1997 *Loading for buildings — Code of practice for wind loads*

BS 8217 : 2005 *Reinforced bitumen membranes for roofing — Code of practice*

BS EN 1991-1-4 : 2005 *Eurocode 1 : Actions on structures — General actions — Wind actions*

BS EN 13165 : 2008 *Thermal insulation products for buildings — Factory made rigid polyurethane foam (PUR) products — Specification*

BS EN ISO 6946 : 2007 *Building components and building elements — Thermal resistance and thermal transmittance — Calculation method*

BS EN ISO 9001 : 2008 *Quality management systems — Requirements*

ENV 1187 : 2002 *Test methods for external fire exposure to roofs*

16 Conditions

16.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page — no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- is valid only within the UK
- has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- is subject to English Law.

16.2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

16.3 This Certificate will remain valid for an unlimited period provided that the product/system and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

16.4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

16.5 In issuing this Certificate, the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- actual installations of the product/system, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product/system is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product/system, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to CE marking.

16.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.

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