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Agrément Certificate

17/5454

Product Sheet 1 Issue 3

POLYFOAM XPS

POLYFOAM FLOORBOARD STANDARD AND EXTRA

This Agrément Certificate Product Sheet⁽¹⁾ relates to Polyfoam Floorboard Standard and Extra, a range of extruded polystyrene (XPS) boards available in two grades, for use as thermal insulation in ground-bearing or suspended concrete ground floors, in new and existing domestic and non-domestic buildings.

(1) Hereinafter referred to as 'Certificate'.

The assessment includes

Product factors:

- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

Process factors:

- compliance with Scheme requirements
- installation, delivery, handling and storage
- production and quality controls
- maintenance and repair

Ongoing contractual Scheme elements†:

- regular assessment of production
- formal 3-yearly review



KEY FACTORS ASSESSED

- Section 1. Mechanical resistance and stability
- Section 2. Safety in case of fire
- Section 3. Hygiene, health and the environment
- Section 4. Safety and accessibility in use
- Section 5. Protection against noise
- Section 6. Energy economy and heat retention
- Section 7. Sustainable use of natural resources
- Section 8. Durability

The BBA has awarded this Certificate to the company named above for the products described herein. These products have been assessed by the BBA as being fit for their intended use provided they are installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of Third issue: 11 November 2025

Originally certified on 20 September 2017

Hardy Giesler
Chief Executive Officer

This BBA Agrément Certificate is issued under the BBA's Inspection Body accreditation to ISO/IEC 17020. Sections marked with † are not issued under accreditation.

The BBA is a UKAS accredited Inspection Body (No. 4345), Certification Body (No. 0113) and Testing Laboratory (No. 0357).

Readers MUST check that this is the latest issue of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.

The Certificate should be read in full as it may be misleading to read clauses in isolation.

Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

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SUMMARY OF ASSESSMENT AND COMPLIANCE

This section provides a summary of the assessment conclusions; readers should refer to the later sections of this Certificate for information about the assessments carried out.

Compliance with Regulations

Having assessed the key factors, the opinion of the BBA is that Polyfoam Floorboard Standard and Extra, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations:



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	A1	Loading
Comment:		The products can contribute to satisfying this Requirement. See section 1 of this Certificate.
Requirement:	C2(c)	Resistance to moisture
Comment:		The products can contribute to satisfying this Requirement. See section 3 of this Certificate.
Requirement:	L1(a)(i)	Conservation of fuel and power
Comment:		The products can contribute to satisfying this Requirement. See section 6 of this Certificate.
Regulation:	7(1)	Materials and workmanship
Comment:		The products are acceptable. See sections 8 and 9 of this Certificate.
Regulation:	25B	Nearly zero-energy requirements for new buildings
Regulation:	26	CO₂ emission rates for new buildings
Regulation:	26A	Fabric energy efficiency rates for new dwellings (applicable to England only)
Regulation:	26A	Primary energy rates for new buildings (applicable to Wales only)
Regulation:	26B	Fabric performance values for new dwellings (applicable to Wales only)
Regulation:	26C	Target primary energy rates for new buildings (applicable to England only)
Regulation:	26C	Energy efficiency rating (applicable to Wales only)
Comment:		The products can contribute to satisfying these Regulations. See section 6 of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)	Fitness and durability of materials and workmanship
Comment:		The products are acceptable. See sections 8 and 9 of this Certificate.
Regulation:	9	Building standards – construction
Standard:	1.1(b)	Structure
		The products can contribute to satisfying this Standard, with reference to clause 1.1.2 ⁽¹⁾⁽²⁾ . See section 1 of this Certificate.
Standard:	3.15	Condensation
Comment:		The products can contribute to satisfying this Standard, with reference to clauses 3.15.1 ⁽¹⁾⁽²⁾ , 3.15.4 ⁽¹⁾⁽²⁾ and 3.15.5 ⁽¹⁾⁽²⁾ . See section 3 of this Certificate.
Standard:	6.1(b)(c)	Energy demand
Comment:		The products can contribute to satisfying this Standard, with reference to clauses 6.1.1 ⁽¹⁾ and 6.1.2 ⁽²⁾ . See section 6 of this Certificate.

Standard:	6.2	Building insulation envelope
Comment:		The products can contribute to satisfying this Standard, with reference to clauses, or parts of clauses, 6.2.1 ⁽¹⁾⁽²⁾ , 6.2.3 ⁽¹⁾ , 6.2.4 ⁽²⁾ , 6.2.6 ⁽¹⁾ , 6.2.7 ⁽¹⁾⁽²⁾ , 6.2.8 ⁽¹⁾⁽²⁾ , 6.2.9 ⁽¹⁾⁽²⁾ , 6.2.10 ⁽¹⁾⁽²⁾ , 6.2.11 ⁽¹⁾⁽²⁾ and 6.2.12 ⁽¹⁾ . See section 6 of this Certificate.
Standard:	7.1(a)(b)	Statement of sustainability
Comment:		The products can contribute to satisfying the relevant requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting at least a bronze level of sustainability as defined in this Standard. In addition, the products can contribute to a construction meeting a higher level of sustainability as defined in this Standard, with reference to clauses 7.1.4 ⁽¹⁾ , 7.1.6 ⁽¹⁾⁽²⁾ , 7.1.7 ⁽¹⁾ , 7.1.9 ⁽²⁾ and 7.1.10 ⁽²⁾ . See section 6 of this Certificate.
Regulation:	12	Building standards – conversion
Comment:		Comments made in relation to the products under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to clause 0.12.1 ⁽¹⁾ and Schedule 6 ⁽¹⁾ .
		(1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



The Building Regulations (Northern Ireland) 2012 (as amended)

Regulation:	23(1)(a)(i)	Fitness of materials and workmanship
Comment:	(iii)(b)(i)(ii)	The products are acceptable. See sections 8 and 9 of this Certificate.
Regulation:	29	Condensation
Comment:		The products can contribute to satisfying this Regulation. See section 3 of this Certificate.
Regulation:	30	Stability
Comment:		The products can contribute to satisfying this Regulation. See section 1 of this Certificate.
Regulation:	39(a)(i)	Conservation measures
Regulation:	40(2)	Target carbon dioxide emission rate
Regulation:	43(1)(2)	Renovation of thermal elements
Regulation:	43B	Nearly zero-energy requirements for new buildings
Comment:		The products can contribute to satisfying these Regulations. See section 6 of this Certificate.

Additional Information

NHBC Standards 2025

In the opinion of the BBA, Polyfoam Floorboard Standard and Extra, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapters 5.1 *Substructure and ground bearing floors* and 5.2 *Suspended ground floors*.

The opinion of the BBA does not amount to any endorsement or approval by NHBC and does not in any way guarantee that NHBC will approve such product / system as compliant with the NHBC Technical Requirements and Standards.

Fulfilment of Requirements

The BBA has judged Polyfoam Floorboard Standard and Extra to be satisfactory for use as described in this Certificate. The products have been assessed for use as thermal insulation in ground-bearing or suspended concrete ground floors, in new and existing domestic and non-domestic buildings.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the products under assessment. Polyfoam Floorboard Standard and Extra consist of XPS boards, available in two grades.

The products have the nominal characteristics given in Table 1.

Table 1 Nominal characteristics

Characteristic (unit)	Product	
	Polyfoam Floorboard Standard	Polyfoam Floorboard Extra
Length (mm)	2500, 1250 ⁽¹⁾	2500, 1250 ⁽¹⁾
Width (mm)	600	600
Thickness (mm) ⁽²⁾	15 to 245 (in 5 mm increments)	15 to 300 (in 5 mm increments)
Edge profile	Square or 15 mm rebated	Square or 15 mm rebated

(1) Boards with a thickness of 100 mm or above are offered in 1250 lengths and with a 15 mm rebated edge.

(2) Thicknesses > 80 mm are achieved by combining multiple insulation boards.

The products are intended for use as floor insulation in new and existing domestic and non-domestic buildings, in:

- ground-supported concrete floors
- suspended concrete ground floors.

Ancillary Items

The Certificate holder recommends the following ancillary items for use with the products, but these materials have not been assessed by the BBA and are outside the scope of this Certificate.

The overlay to the products should be:

- an air and vapour control layer (AVCL) where necessary (see sections 3 and 9) and:
- a cement-based floor screed of minimum 65 mm⁽¹⁾ thickness, laid in accordance with the relevant clauses of BS 8204-1 : 2003 and/or BS 8204-2 : 2003, and BS 8000-9 : 2003, or
- wood-based floor (eg tongue-and-groove plywood to BS EN 636 : 2012, flooring grade particle board [Type P4 or P7] to BS EN 312 : 2010 or oriented strand board [type OSB/3 to OSB/4] to BS EN 300 : 2006), of a thickness to be determined by a suitably experienced and competent individual, and installed in accordance with PD CEN/TR 12872 : 2014 and BS EN 12871 : 2013, using a water-resistant adhesive to the joints or
- a concrete slab to BS EN 1992-1-1 : 2004.

(1) The NHBC only accept ground-supported floor slabs with at least 100 mm thick concrete including a monolithic screed.

Product assessment – key factors

The products were assessed for the following key factors, and the outcome of the assessment is shown below. Conclusions relating to the Building Regulations apply to the whole of the UK unless otherwise stated.

1 Mechanical resistance and stability

Data were assessed for the following characteristic.

1.1 Floor loading

1.1.1 The products were tested for compressive strength, and the results are given in Table 2.

Table 2 Compressive strength

Product assessed	Assessment method	Requirement	Result
Polyfoam Floorboard Standard	BS EN 826 : 2013	Declared minimum	200 kPa
Polyfoam Floorboard Extra		compressive strength of the product at 10% deformation	300 kPa

1.1.2 On the basis of data assessed, the products are suitable for the domestic occupancies defined in this Certificate when covered with a suitable floor overlay, and are capable of resisting a uniformly distributed load of $1.5 \text{ kN}\cdot\text{m}^{-2}$ or a concentrated load of 2 kN for category A1 and A2 (domestic) situations as defined in the UK National Annex to BS EN 1991-1-1 : 2002, Table NA2. Further assessment by a suitably experienced and competent individual is necessary in the case of duty walkways and floors subject to physical activities.

1.1.3 On the basis of data assessed, the products are also suitable for the non-domestic occupancies defined in this Certificate when covered with a suitable floor overlay, and are capable of resisting a uniformly distributed load of $3 \text{ kN}\cdot\text{m}^{-2}$ for category B2 (offices) and $4 \text{ kN}\cdot\text{m}^{-2}$ for category C33 (non-domestic), or a concentrated load of 2.7 kN for category B2 (offices) and 4.5 kN for category C33 (non-domestic), as defined in the UK National Annex to BS EN 1991-1-1 : 2002, Tables NA.2 and NA.3. Further assessment by a suitably experienced and competent individual is necessary in the case of duty walkways and floors subject to physical activities.

1.1.4 The performance of a specific floor construction will depend on the insulation properties and type of floor overlay used (including thickness and strength). When the products are used under a concrete slab, resistance to concentrated and distributed loads is a function of the slab specification. Further guidance on the suitability of floor coverings can be found in BS EN 13810-1 : 2002, DD CEN/TS 13810-2 : 2003, BS 8204-1 : 2003 and BS EN 312 : 2010, and from the flooring manufacturer, although the latter is outside the scope of this Certificate.

2 Safety in case of fire

Data were assessed for the following characteristics.

2.1 Reaction to fire

2.1.1 The products were tested for reaction to fire and the classifications achieved are given in Table 3.

Table 3 Reaction to fire classification

Product assessed	Assessment method	Requirement	Result
Polyfoam Floorboard Standard ⁽¹⁾	BS EN 13501-1 : 2018	Value achieved	F
Polyfoam Floorboard Extra ⁽²⁾			F

(1) Warringtonfire, classification report no. WF 502432, 30 April 2021, Issue no. 1, copies available from the Certificate holder on request.

(2) Warringtonfire, classification report no. WF 502435, 30 April 2021, Issue no. 1, copies available from the Certificate holder on request.

2.1.2 The classification and permissible areas of use of other specifications must be confirmed by reference to the requirements of the documents supporting the national Building Regulations.

2.2 Resistance to fire

Where an intermediate floor incorporating the products is required to achieve a period of fire resistance, its performance must be confirmed by a suitably experienced and competent individual or by a test from a suitably accredited laboratory.

3 Hygiene, health and the environment

Data were assessed for the following characteristics.

3.1 Water vapour permeability

The products were tested for water vapour resistivity, and the results are given in Table 4.

Table 4 Water vapour resistivity

Product assessed	Assessment method	Requirement	Result
Polyfoam Floorboard Standard	BS EN 12086 : 2013	Value achieved	744 MN·s·g ⁻¹ ·m ⁻¹
Polyfoam Floorboard Extra			705 MN·s·g ⁻¹ ·m ⁻¹

3.2 Condensation

3.2.1 The BBA has assessed the products for the risk of interstitial condensation, and the following must be implemented:

3.2.1.1 An AVCL must be installed on the warm side of the insulation to inhibit the risk of interstitial condensation, unless a risk assessment shows this is not necessary.

3.2.1.2 Voids below suspended concrete ground floors must be ventilated. Ventilation may be achieved by installing vents not less than 1500 mm²·m⁻¹ run of external wall or 500 mm²·m⁻² of floor area, whichever is the greater. Ventilation openings must be arranged to prevent the ingress of rain, snow, birds and small mammals, and the risk of subsequent blockage by other building operations.

4 Safety and accessibility in use

Not applicable.

5 Protection against noise

Not applicable.

6 Energy economy and heat retention

Data were assessed for the following characteristics.

6.1 Thermal conductivity

The products were tested for thermal conductivity, and the results are given in Table 5.

Table 5 Thermal conductivity

Product assessed	Assessment method	Requirement	Result
Polyfoam Floorboard Standard	BS EN 13164 : 2012	Declared value (λ_D)	0.033 W·m ⁻¹ ·K ⁻¹
Polyfoam Floorboard Extra			0.031 W·m ⁻¹ ·K ⁻¹

6.2 Conservation of fuel and power

6.2.1 The U value of a ground floor will depend on the insulation type and thickness, the perimeter/area ratio, the ground conductivity and, additionally for suspended ground floors, the amount of underfloor ventilation and the floor void wall U value. Example U values are given in Table 6.

Table 6 Example U Values — ground floor construction

Floor type	Grade	Target U Value (W·m ⁻² ·K ⁻¹)	P/A Ratio (m·m ⁻²)				
			Insulation thickness (mm) ⁽⁷⁾				
			0.2	0.4	0.6	0.8	1.0
Ground-bearing concrete floor ⁽¹⁾⁽⁵⁾	Polyfoam Floorboard Standard ⁽³⁾	0.11	175	225	240	— ⁽⁶⁾	— ⁽⁶⁾
		0.12	155	200	215	225	230
		0.13	135	180	195	205	210
		0.15	105	150	165	175	180
		0.18	75	115	130	140	145
		0.21	50	90	105	115	120
		0.22	45	85	100	110	115
		0.25	30	70	80	90	95
	Polyfoam Floorboard Extra ⁽⁴⁾	0.11	165	210	225	235	240
		0.12	145	190	205	210	215
		0.13	130	170	185	195	200
		0.15	100	140	155	165	170
		0.18	70	110	125	130	135
		0.21	50	85	100	110	110
		0.22	40	80	95	100	105
		0.25	30	65	75	85	90
	Suspended concrete ground floor ⁽²⁾⁽⁵⁾	0.11	205	230	245	— ⁽⁶⁾	— ⁽⁶⁾
		0.12	180	210	220	225	230
		0.13	160	190	200	205	210
		0.15	130	160	170	175	180
		0.18	95	125	135	140	145
		0.21	70	100	110	115	120
		0.22	65	90	100	110	110
		0.25	45	75	85	90	95
	Polyfoam Floorboard Extra ⁽⁴⁾	0.11	190	220	230	235	235
		0.12	170	195	205	215	215
		0.13	150	180	190	195	195
		0.15	120	150	160	165	165
		0.18	90	115	125	130	135
		0.21	65	95	105	110	110
		0.22	60	85	95	100	105
		0.25	45	70	80	85	90

- (1) Ground-bearing concrete floor construction (insulation on top of slab, under screed finish) — 65 mm concrete screed ($\lambda = 1.15 \text{ W} \cdot \text{m}^{-1} \cdot \text{K}^{-1}$), polyethylene separating layer, Polyfoam Floorboard Standard or Extra, damp-proof membrane (DPM), 100 mm concrete slab, 150 mm sand-blinded hardcore, ground ($\lambda = 1.5 \text{ W} \cdot \text{m}^{-1} \cdot \text{K}^{-1}$).
- (2) Suspended concrete ground floor construction (insulation on top of beam-and-block, below screed finish) — 65 mm concrete screed ($\lambda = 1.15 \text{ W} \cdot \text{m}^{-1} \cdot \text{K}^{-1}$), polyethylene separating layer, Polyfoam Floorboard Standard or Extra, beam-and-block floor (12%), Beam ($\lambda = 2.00 \text{ W} \cdot \text{m}^{-1} \cdot \text{K}^{-1}$), dense block infill ($\lambda = 1.13 \text{ W} \cdot \text{m}^{-1} \cdot \text{K}^{-1}$), 150 mm ventilated void, ground ($\lambda = 1.5 \text{ W} \cdot \text{m}^{-1} \cdot \text{K}^{-1}$).
- (3) 25 mm edge insulation, $\lambda_D = 0.033 \text{ W} \cdot \text{m}^{-1} \cdot \text{K}^{-1}$, 65 mm deep.
- (4) 25 mm edge insulation, $\lambda_D = 0.031 \text{ W} \cdot \text{m}^{-1} \cdot \text{K}^{-1}$, 65 mm deep.
- (5) Supporting wall (U_w) $1.7 \text{ W} \cdot \text{m}^{-2} \cdot \text{K}^{-1}$, wall thickness at the floor perimeter (w) 0.3 m.
- (6) Can be achieved with Polyfoam Floorboard Extra.
- (7) Thicknesses can be achieved by multilayering the available thicknesses from Table 1.

6.2.2 The products can contribute towards a floor construction satisfying the national Building Regulations in respect of energy economy and heat retention.

6.2.3 Where a construction is used with the DPM above the insulation on a slab on the ground, a moisture correction factor must be considered for the design thermal conductivity used, in accordance with BS EN ISO 10456 : 2007.

7 Sustainable use of natural resources

Not applicable.

8 Durability

8.1 The potential mechanisms for degradation and the known performance characteristics of the materials in the products were assessed.

8.2 Specific test data were assessed as given in Table 7.

Table 7 Durability tests

Product assessed	Assessment method	Requirement	Result
Polyfoam Floorboard Standard	Dimensional stability to BS EN 1604 : 2013 (23°C and 90% RH for 48 hours)	Length, width and reduction in thickness	Pass
Polyfoam Floorboard Extra		≤ 5% change	Pass
Polyfoam Floorboard Standard	Compressive creep to BS EN 1606 : 2013	Declared level CC(2/0.5/50)46	Pass
Polyfoam Floorboard Extra		Declared level CC(2/1.5/50)106	Pass

8.3 Service life

Under normal service conditions, the products will have a life equivalent to the building in which they are incorporated, provided they are designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

PROCESS ASSESSMENT

Information provided by the Certificate holder was assessed for the following factors:

9 Design, installation, workmanship and maintenance

9.1 Design

9.1.1 The design process was assessed by the BBA, and the following requirements apply in order to satisfy the performance assessed in this Certificate.

9.1.2 The products can be used on suitably designed beam-and-block floors incorporating Type R2 semi-resisting or resisting blocks to BS EN 15037-2 : 2009 and self-bearing beams to BS EN 15037-1 : 2008.

9.1.3 Ground-bearing floors must only be used where the depth of compacted fill is less than 600 mm and is defined as non-shrinkable. Shrinkable fills are defined as material containing more than 35% fine particles (silt and clay) with a plasticity index of 10% or greater (shrinkable fills are susceptible to clay heave).

9.1.4 Ground-bearing concrete and suspended concrete ground floors incorporating the products must include a suitable DPM, in accordance with the relevant sections of CP 102 : 1973, BS 8102 : 2009 and BS 8215 : 1991 (see section A.4 of this Certificate).

9.1.5 Suspended concrete ground floors incorporating the product must include suitable ventilation of the sub-floor void (minimum 150 mm void between the underside of the floor and the ground surface) or a DPM. For suspended floors in locations where clay heave is anticipated, an additional void of up to 150 mm may be required to accommodate the possible expansion of the ground below the floor. In such cases where the risk of clay heave has been confirmed by geotechnical investigations by a suitably experienced and competent individual, a total void of up to 300 mm may be required.

9.1.6 Where a concrete screed or slab finish is to be laid directly over the products, a polyethylene separating layer/AVCL must be installed between the insulation and the concrete to prevent chemical attack and seepage between the boards (see section A.6). Any gaps between insulation boards or around service openings, visible prior to installing the concrete, must be filled with expanding foam or strips of insulation.

9.1.7 Walls must not be built on the insulation.

9.1.8 Calculations of the thermal transmittance (U value) of a floor must be carried out in accordance with BS EN ISO 6946 : 2017 and BRE Report BR 443 : 2019.

9.1.9 Care must be taken in the overall design and construction of junctions with other elements and openings to minimise thermal bridges and air infiltration; the detailed guidance that can be found in the documents supporting the national Building Regulations must be followed.

Interstitial condensation

9.1.10 Floors will adequately limit the risk of interstitial condensation when they are designed and constructed in accordance with BS 5250 : 2021.

9.1.11 When the products are used above the DPM on a ground-bearing or suspended floor, an AVCL is installed on the warm side of the insulation to limit the risk of interstitial condensation, unless a risk assessment shows this is not necessary.

Surface condensation

9.1.12 In England and Wales, floors will adequately limit the risk of surface condensation when the thermal transmittance (U value) does not exceed $0.7 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$ at any point, and the junctions with walls are designed in accordance with section 9.1.9 of this Certificate.

9.1.13 In Scotland, floors will adequately limit the risk of surface condensation when the thermal transmittance (U value) does not exceed $1.2 \text{ W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$ at any point and the floor is designed and constructed in accordance with the relevant parts of BS 5250 : 2021.

9.1.14 Further guidance may be obtained from BRE Report BR 262 : 2002 and section 6 of this Certificate.

9.2 Installation

9.2.1 Installation instructions provided by the Certificate holder were assessed and judged to be appropriate and adequate.

9.2.2 Installation must be carried out in accordance with this Certificate and the Certificate holder's instructions. A summary of instructions and guidance is provided in Annex A of this Certificate.

Incorporation of services

9.2.3 De-rating of electrical cables must be considered where the insulation restricts air cooling of cables; the products must not be used in direct contact with electrical heating cables or hot water pipes. Where underfloor heating systems are to be used, the advice of the Certificate holder should be sought, but such advice is outside the scope of this Certificate.

9.2.4 Where possible, electrical conduits, gas and water pipes or other services must be contained within ducts or channels within the concrete slab of ground bearing floors. Where this is not possible, the services may be accommodated within the insulation, provided they are securely fixed to the concrete slab. Electrical cables that are likely to come into contact with the insulation must be protected by a suitable conduit or PVC-U trunking. With hot pipes, the insulation must be cut back to maintain an air space.

9.2.5 Where water pipes are installed below the insulation, they must be pre-lagged with close-fitting pipe insulation.

9.2.6 Where the products are installed on a floor of a suspended beam-and-block design, all services must be installed in accordance with a BBA Certificate for that floor and/or with the relevant codes of practice.

9.2.7 To provide support for a particle board cover on overlay board floors where access to the services is desirable, a duct may be formed by mechanically fixing to the floor, timber bearers of the same thickness as the insulation. The duct must be as narrow as possible and not exceed 400 mm in width or the maximum particle board spans given in PD CEN/TR 12872 : 2014 without intermediate support. Services must be suitably fixed to the floor base and not to the insulation boards (see section 9.1.9 of this Certificate regarding limiting heat loss).

9.3 Workmanship

Practicability of installation was assessed by the BBA on the basis of the Certificate holder's information. To achieve the performance described in this Certificate, installation of the products must be carried out by a competent general builder, or a contractor, experienced with these types of products.

9.4 Maintenance and repair

As the products are confined within the floor by the overlay and have suitable durability, maintenance is not required.

10 Manufacture

10.1 The production processes for the products have been assessed, and provide assurance that the quality controls are satisfactory according to the following factors:

10.1.1 The manufacturer has provided documented information on the materials, processes, testing and control factors.

10.1.2 The quality control operated over batches of incoming materials has been assessed and deemed appropriate and adequate.

10.1.3 The quality control procedures and product testing to be undertaken have been assessed and deemed appropriate and adequate.

10.1.4 The process for management of non-conformities has been assessed and deemed appropriate and adequate.

10.1.5 An audit of each production location was undertaken, and it was confirmed that the production process was in accordance with the documented process, and that equipment has been properly tested and calibrated.

† 10.2 The BBA has undertaken to review 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.

11 Delivery and site handling

11.1 The Certificate holder stated that the products are delivered to site in packaging bearing the product name and characteristics, product code, batch number, UKCA/CE marking information, the Certificate holder's name and the BBA logo incorporating the number of this Certificate.

11.2 Delivery and site handling must be performed in accordance with the Certificate holder's instructions and this Certificate, including:

11.2.1 The boards must be stored flat, off the ground on a clean, level surface, and under cover or protected with opaque polythene, to protect them from high winds and prolonged exposure to sunlight. Where possible, packs should be stored inside. If outside, the boards must be raised above ground level.

11.2.2 Care must be exercised to avoid crushing the edges or corners. If damaged, the boards must be discarded.

11.2.3 The boards must not be exposed to open flame or other ignition sources, or to solvents or other chemicals.

Supporting information in this Annex is relevant to the products but has not formed part of the material assessed for the Certificate.

Construction (Design and Management) Regulations 2015

Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

UKCA marking

The Certificate holder has taken the responsibility of UKCA marking the products in accordance with Designated Standard EN 13164 : 2012.

CE marking

The Certificate holder has taken the responsibility of CE marking the products in accordance with harmonised European Standard EN 13164 : 2012.

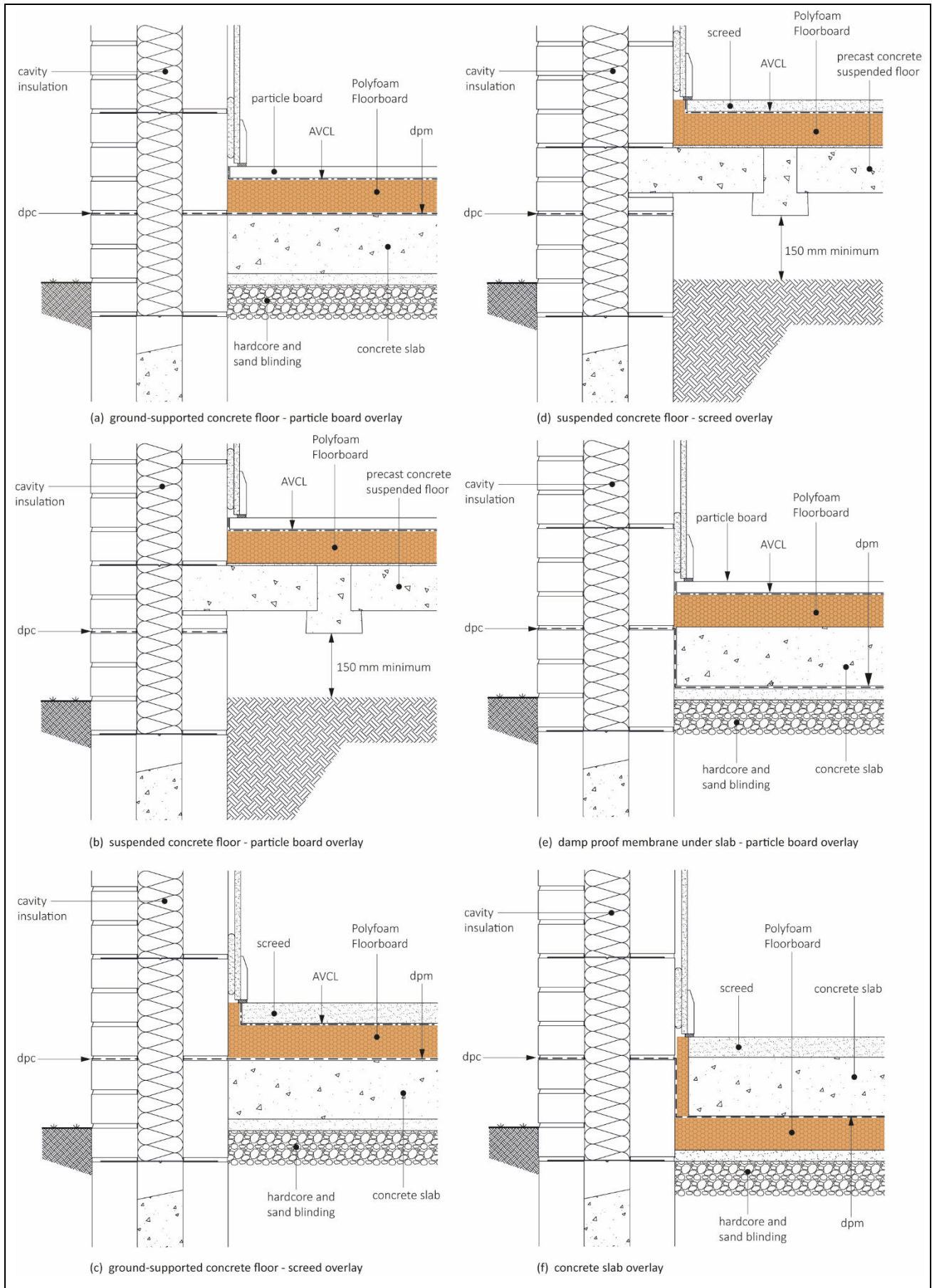
Management Systems Certification for production

The management system of the manufacturer has been assessed and registered as meeting the requirements of ISO 9001 : 2015, ISO 14001 : 2015 and ISO 45001 : 2018 by Lucideon CICS Limited (Certificates 24926, 24927 and 24928 respectively).

Additional information on installation

A.1 Typical methods of installation are shown in Figure 1. Reference should also be made to BRE Report BR 262 : 2002.

Figure 1 Typical installations



A.2 In ground-bearing concrete floors, the concrete floor slab over which the boards are to be laid should be left for as long as possible to maximise drying out and dissipation of constructional moisture, in accordance with BS 8203 : 2017, Section 3.1.2.

A.3 The concrete floor surface must be smooth, level, and flat to within 5 mm when measured with a two-metre straight-edge. Irregularities greater than this must be removed. Minor irregularities (up to 10 mm deep) may be levelled with mortar or thin screed.

A.4 Where the insulation is used over ground-bearing concrete floor slabs, a suitable DPM in accordance with CP 102 : 1973 should be laid to resist moisture from the ground. If a liquid-type DPM is applied to the slabs, it should be of a type compatible with the products and be allowed to dry out fully before laying the insulation.

A.5 Where the insulation is used on hardcore bases beneath ground-bearing concrete slabs, the hardcore must be compacted and blinded with a thin layer of sand before application of the DPM, followed by the insulation boards.

A.6 An AVCL is installed on the warm side of the insulation to inhibit the risk of interstitial condensation if necessary (see section 9). Where a concrete screed or slab finish is to be laid directly over the products, a polyethylene separating layer/AVCL must be installed between the insulation and the concrete to prevent chemical attack and seepage between the boards.

A.7 Where a screed or concrete slab is laid over the insulation, vertical upstands of insulation should be provided and be of sufficient depth to fully separate the screed or slab from the wall. If used, a suitable cavity wall insulation material should be extended below the damp-proof course (DPC) level to provide edge insulation to the floor.

A.8 To limit the risk of condensation and other sources of dampness, the insulation and overlays should only be laid after the construction is made substantially weathertight, eg after glazing. During construction, the insulation and overlay must be protected from damage by traffic and moisture sources such as water spillage and plaster droppings.

Procedure

A.9 The products are cut to size (using a sharp knife or fine-toothed saw), as necessary, and laid with closely butted, staggered cross-joints, ensuring all spaces are completely filled.

A.10 The laying pattern should ensure that all cut edges are at the perimeter of the floor or some other feature, eg mat wells, thresholds or access ducts. Spreader boards should be used to protect the insulation.

A.11 If double or triple layers are required then insulation board joints should be horizontally offset to avoid coincidental board joints in two adjacent layers.

Timber-based board overlay

A.12 Before laying the plywood, particle board or OSB overlay, preservative-treated timber battens, in accordance with BS 8417 : 2011, are positioned at doorways and access panels. Adequate time should be allowed for preservatives to be fixed, and the solvents from solvent-based preservatives to evaporate.

A.13 Where the insulation is laid above a DPM, a polyethylene AVCL of at least 0.125 mm (500 gauge) thickness is laid between the insulation and the timber board overlay. The AVCL should have 150 mm overlaps, taped at the joints and turned up 100 mm at the walls.

A.14 Timber-based overlay boards, as specified in section 9, are laid with staggered cross-joints, in accordance with PD CEN/TR 12872 : 2014 and BS EN 12871 : 2013.

A.15 An expansion gap between the overlay board and the perimeter walls should be provided at the rate of 2 mm per metre run or a minimum of 10 mm, whichever is the greater.

A.16 Where there are long, uninterrupted lengths of floor (eg corridors), proprietary expansion joints should be installed at intervals, on the basis of a 2 mm gap per metre run of overlay board.

A.17 Before the overlay boards are interlocked, a water-resistant adhesive is applied to the joints. The Certificate holder can advise on suitable materials for this purpose, but such advice and products are outside the scope of this Certificate.

A.18 Once the overlay board is laid, temporary wedges are inserted between the walls and the floor to maintain tight joints until the adhesive has set.

A.19 When the wedges are removed and before the skirting boards are fixed, a suitable compressible filler, eg foamed polyethylene, should be fitted around the perimeter of the floor between the overlay board and the walls.

A.20 Where there is a likelihood of regular water spillage (eg in kitchens, bathrooms, shower and utility rooms), additional overlay board protection should be considered, eg by a continuous flexible vinyl sheet flooring, with welded joints, turned up at abutments and cove skirting.

Cement-based screed overlay

A.21 Perimeter edge pieces are cut and placed around the edges and taped at joints. A polyethylene AVCL, at least 0.125 mm thick (500 gauge), is laid over the insulation. The AVCL should have 150 mm overlaps, taped at the joints and turned up 100 mm at the walls. A properly compacted screed of minimum thickness 65 mm is then laid over. The relevant clauses of BS 8204-1 : 2003 should be followed.

Concrete slab overlay (ground-bearing only)

A.22 Perimeter edge pieces are cut and placed around the edges and taped at the joints. A polyethylene AVCL, minimum 0.125 mm thick (500 gauge), is laid over the insulation. The AVCL should have 150 mm overlaps, taped at the joints and turned up 100 mm at the walls. The concrete slab is laid to the required thickness in accordance with BS 8000-9 : 2003 and BS 8204-1 : 2003.

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Conditions of Certificate

Conditions

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