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Agrément Certificate
13/5060
Product Sheet 1

DOW CHEMICAL INSULATION

FLOORMATE 300-A FLOOR INSULATION

This Agrément Certificate Product Sheet⁽¹⁾ relates to Floormate 300-A Floor Insulation, an extruded polystyrene board for insulating ground-supported or suspended concrete floors and is used to reduce the thermal transmittance of new floors of dwellings.

(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 can contribute towards the thermal performance of a floor. The declared thermal conductivity (λ_D values) of the product is $0.034 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ for board thicknesses ranging from 100 mm to 120 mm and $0.036 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ for thicknesses greater than 120 mm (see section 6).

Floor loading — the product, when covered with a suitable overlay as specified in section 4.3, can support a design loading without undue compression deflection (see section 7).

Behaviour in relation to fire — the product will be contained within the floor by the overlay until the overlay itself is destroyed (see section 8).

Durability — the product is dimensionally stable and, when installed with the overlays specified in section 4.3, will remain effective as an insulating material for the life of the building in which it is incorporated (see section 11).

The BBA has awarded this Certificate to the company named above for the Floormate 300-A Floor Insulation described herein. This product 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: 23 October 2013

John Albon — Head of Approvals
Energy and Ventilation

Claire Curtis-Thomas
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, Floormate 300-A Floor Insulation, if installed, used and maintained in accordance with this Certificate, will satisfy or contribute to satisfying 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) (as amended)

Requirement: A1	Loading
Comment:	The product has adequate strength and stiffness. See section 7.1 of this Certificate.
Requirement: C2(c)	Resistance to moisture
Comment:	The product can contribute to satisfying this Requirement. See sections 9.1 and 9.3 of this Certificate.
Requirement: L1(a)(i)	Conservation of fuel and power
Comment:	The product can contribute to satisfying this Requirement. See sections 6.1 and 6.3 of this Certificate.
Regulation: 7	Materials and workmanship
Comment:	The product is acceptable. See section 11 and the <i>Installation</i> part of this Certificate
Regulation: 26	CO₂ emission rates for new buildings
Comment:	The product can contribute to satisfying this Requirement. See sections 6.1 and 6.3 of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation: 8(1)	Durability, workmanship and fitness of materials
Comment:	The product is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation: 9	Building standards applicable to construction
Standard: 1.1(a)(b)	Structure
Comment:	The product has adequate strength and stiffness, with reference to clause 1.1.1 ⁽¹⁾ . See section 7.1 of this Certificate.
Standard: 3.15	Condensation
Comment:	The product can contribute to satisfying this Standard, with reference to clauses 3.15.1 ⁽¹⁾ , 3.15.4 ⁽¹⁾ and 3.15.5 ⁽¹⁾ . See sections 9.1 and 9.4 of this Certificate.
Standard: 6.1(b)	Carbon dioxide emissions
Standard: 6.2	Building insulation envelope
Comment:	The product can contribute to satisfying clauses, or parts of, 6.1.2 ⁽¹⁾ , 6.1.6 ⁽¹⁾ , 6.2.1 ⁽¹⁾ , 6.2.7 ⁽¹⁾ , 6.2.9 ⁽¹⁾ , 6.2.11 ⁽¹⁾ , and 6.2.13 ⁽¹⁾ of these Standards. See sections 6.1 and 6.3 of this Certificate.
Standard: 7.1(a)(b)	Statement of sustainability
Comment:	The product can contribute to satisfying 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⁾ [Aspects 1 ⁽¹⁾ and 2 ⁽¹⁾], 7.1.6 ⁽¹⁾ [Aspects 1 ⁽¹⁾ and 2 ⁽¹⁾] and 7.1.7 ⁽¹⁾ [Aspect 1 ⁽¹⁾]. See section 6.1 of this Certificate.
Regulation: 12	Building standards applicable to conversions
Comment:	Comments made in relation to this product 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

Regulation: 23	Fitness of materials and workmanship
Comment:	The product is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
Regulation: 29	Condensation
Comment:	The product can contribute to satisfying this Regulation. See section 9.1 of this Certificate.
Regulation: 30	Stability
Comment:	The product has adequate strength and stiffness. See section 7.1 of this Certificate.
Regulation: 39	Conservation measures
Regulation: 40(2)	Target carbon dioxide emission rate
Comment:	The product can contribute to satisfying these Regulations. See sections 6.1 and 6.3 of this Certificate.

Construction (Design and Management) Regulations 2007

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* (3.4) of this Certificate.

Additional Information

NHBC Standards 2013

NHBC accepts the use of Floormate 300-A Floor Insulation provided it is installed, used and maintained in accordance with this Certificate, in relation to *NHBC Standards*, Chapter 5.1 *Substructure and ground bearing floors*.

CE marking

The Certificate holder has taken the responsibility of CE marking the products in accordance with harmonised European Standard BS EN 13164 : 2012. 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 Floormate 300-A Floor Insulation consists of rigid, extruded polystyrene boards, in accordance with BS EN 13164 : 2012.

1.2 The boards are supplied with the characteristics shown in Table 1.

Table 1 Nominal characteristics

Nominal characteristic (unit)	Value
Minimum density (kg·m ⁻³)	33
Compressive strength* (kPa)	>300
Overall size (mm)	2500 x 600
Edge detail	butt edge
Thickness* (mm)	100, 125, 150 and 200
Colour	blue

2 Manufacture

2.1 The product is manufactured on a continuous automated production line. Raw materials are transferred from storage silos to 'day-hoppers' and fed into individual weigh-hoppers in which the prescribed raw material quantities are automatically check-weighed. Ingredients are mixed/transferred in a horizontal screw conveyor to the extruder. A plastic melt is formed in the extruder into which a blowing agent is injected. The melt is extruded through a die to form a continuous board.

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 nonconformities
- 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 Dow Chemical Company Ltd has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2008 by BSI Management Systems (Certificate Q05968).

3 Delivery and site handling

3.1 The product is delivered to site bearing the manufacturer's name and the BBA logo incorporating the number of this Certificate on the label.

3.2 The product must be protected from prolonged exposure to sunlight by either storage under cover or covering with light-coloured, opaque polythene sheets.

3.3 Care must be taken to prevent contact with solvents and materials containing organic components.

3.4 Where large volumes are stored, especially indoors, flammable material and ignition sources should not be permitted in the vicinity and adequate ventilation (at least two air changes per hour) should be ensured.

3.5 If the product has become wet or damaged, it must be discarded.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Floormate 300-A Floor Insulation.

Design Considerations

4 General

4.1 Floormate 300-A Floor Insulation is effective in reducing the U value (thermal transmittance) of new or existing ground floors.

4.2 Ground-supported concrete and suspended ground floors incorporating the insulation must include a suitable damp-proof membrane (dpm) laid in accordance with the relevant clauses of CP 102 : 1973, BS 8102 : 2009 and/or BS 8215 : 1991, or suitable ventilation of the sub-floor, as appropriate.

4.3 The overlay to the insulation should be:

- a cement-based floor screed laid in accordance with the relevant clauses of BS 8204-1 : 2003 and/or BS 8204-2 : 2003, or
- the floor finish should be installed in accordance with BS EN 12871 : 2010, or
- a concrete slab in accordance with BS EN 1992-1-1 : 2004.

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 the thermal transmittance (U value) of a floor construction should be carried out in accordance with BS EN ISO 6946 : 2007, BS EN ISO 13370 : 2007 and BRE Report BR 443 : 2006, using the declared thermal conductivity (λ_D value) as given in Table 2.

Table 2 Declared thermal conductivity (λ_D values)

Thickness (mm)	Thermal conductivity* ($W \cdot m^{-1} \cdot K^{-1}$)
100	0.034
150 and 200	0.036

6.2 Examples of U values achieved by different thicknesses of insulation used in suspended or ground-supported floors are given in Table 3.

Table 3 Floor U values⁽¹⁾⁽²⁾

Floor type	Perimeter/area ratio	Insulation thickness (mm)		
		100	150	200
Slab ground-supported	0.2	0.16	0.13	0.11
	0.4	0.21	0.16	0.13
	0.6	0.23	0.18	0.14
	0.8	0.24	0.19	0.15
	1.0	0.25	0.19	0.15
Suspended beam-and-block	0.2	0.18	0.15	0.12
	0.4	0.21	0.17	0.14
	0.6	0.23	0.18	0.14
	0.8	0.24	0.18	0.15
	1.0	0.24	0.19	0.15

(1) Constructions and boundary conditions used for both constructions are in accordance with BRE Report BR 443 : 2006, Chapters 9.1 and 9.2.

(2) Where a construction is used with the dpm above the insulation on a slab on the ground, a moisture correction factor should be considered for the thermal conductivity used, in accordance with BS EN ISO 10456 : 2007.



6.3 The product can contribute to maintaining continuity of thermal insulation at junctions between elements. For Accredited Construction Details the corresponding ψ -values (psi) in BRE Information Paper IP 1/06, 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). For new build, see also SAP 2009 *The Government's Standard Assessment Procedure for Energy Rating of Dwellings*, Appendix K and the *iSBEM User Manual*

Scotland — Accredited Construction Details (Scotland)

Northern Ireland — Accredited Construction Details (version 1.0).

7 Floor loading



7.1 The product, when covered with particle board or screed, can support the aforementioned design loadings as defined in BS EN 1991-1-1 : 2002 and BS EN 1991-1-7 : 2006 and their relevant UK National Annexes, without undue compression deflection of the insulant.

7.2 Where the product is used under a concrete slab, resistance to concentrated and distributed loads is a function of the slab specification.

8 Behaviour in relation to fire

8.1 The product is classified as Class E in accordance with BS EN 13501-1 : 2007.

8.2 The product does not prejudice the fire resistance properties of the floor.

8.3 When properly installed, the product will not add significantly to any existing fire hazard. The product will be contained within the floor by the overlay until the overlay itself is destroyed. Therefore, the product will not contribute to the development stages of a fire or present a smoke or toxic hazard.

8.4 Electrical cables running within the polystyrene should be separated from it by enclosing them within a suitable conduit, eg rigid PVC-U.

9 Condensation

Interstitial condensation



9.1 Floors will adequately limit the risk of interstitial condensation when they are designed and constructed in accordance with BS 5250 : 2011, Annex F.

9.2 When the product is used above the dpm on a ground-supported floor, or on a beam-and-block floor, a vapour control layer (VCL) is installed on the warm side of the insulation to inhibit the risk of interstitial condensation on the upper slab surface.

Surface condensation



9.3 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 the relevant requirements of *Limiting thermal bridging and air leakage : Robust construction details for dwellings and similar buildings* TSO 2002 or BRE Information Paper IP 1/06.



9.4 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. Guidance may be obtained from BS 5250 : 2011, Annex F, and BRE Report BR 262 : 2002.

10 Maintenance

As the product is confined within the floor and has suitable durability (see section 11), maintenance is not required.

11 Durability



The insulation is rot-proof, dimensionally stable and, when installed with the overlays specified in this Certificate, will remain effective as an insulating material for the life of the building in which it is incorporated.

12 General

12.1 Installation of Floormate 300-A Floor Insulation must be in accordance with the Certificate holder's installation instructions and the requirements of this Certificate.

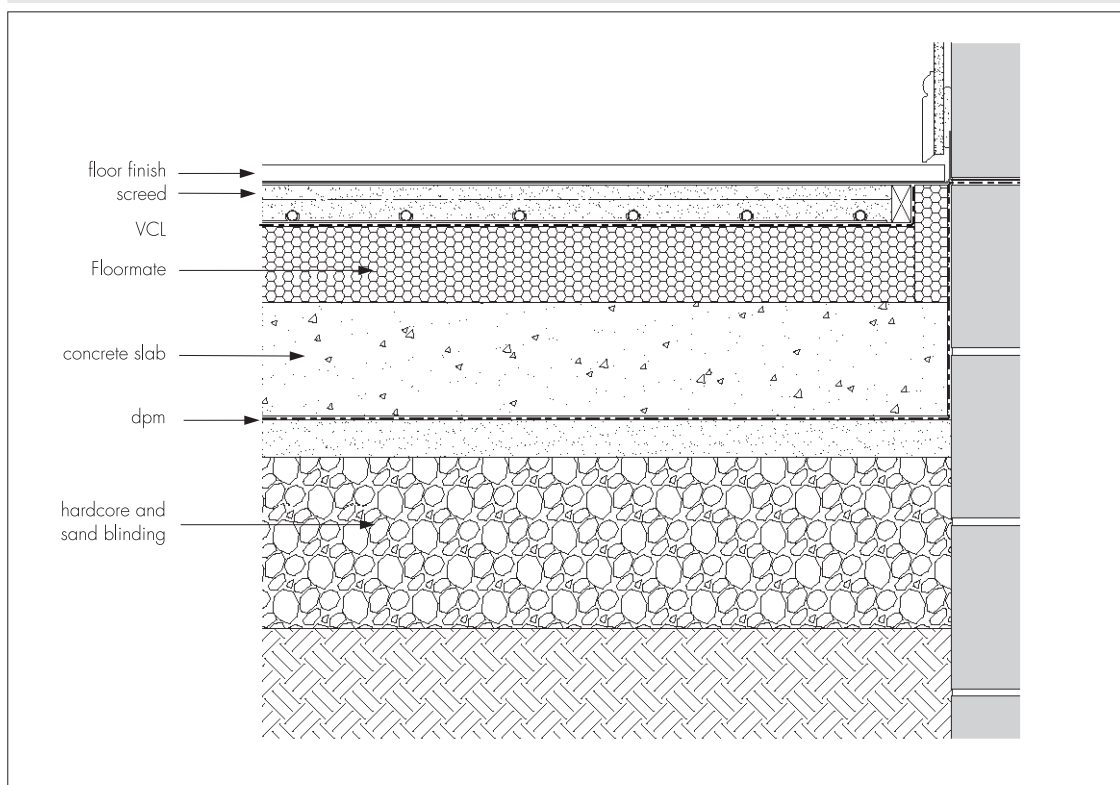
12.2 For typical methods of installation reference should also be made to BRE Report BR 262 : 2002.

12.3 All floor surfaces should be smooth, level and flat to within 5 mm when measured with a three-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.

12.4 In ground-supported concrete floors, the concrete floor slab over which the insulation is laid should be left for as long as possible to maximise drying out and dissipation of constructional moisture, in accordance with BS 8203 : 2001, Section 3.1.2.

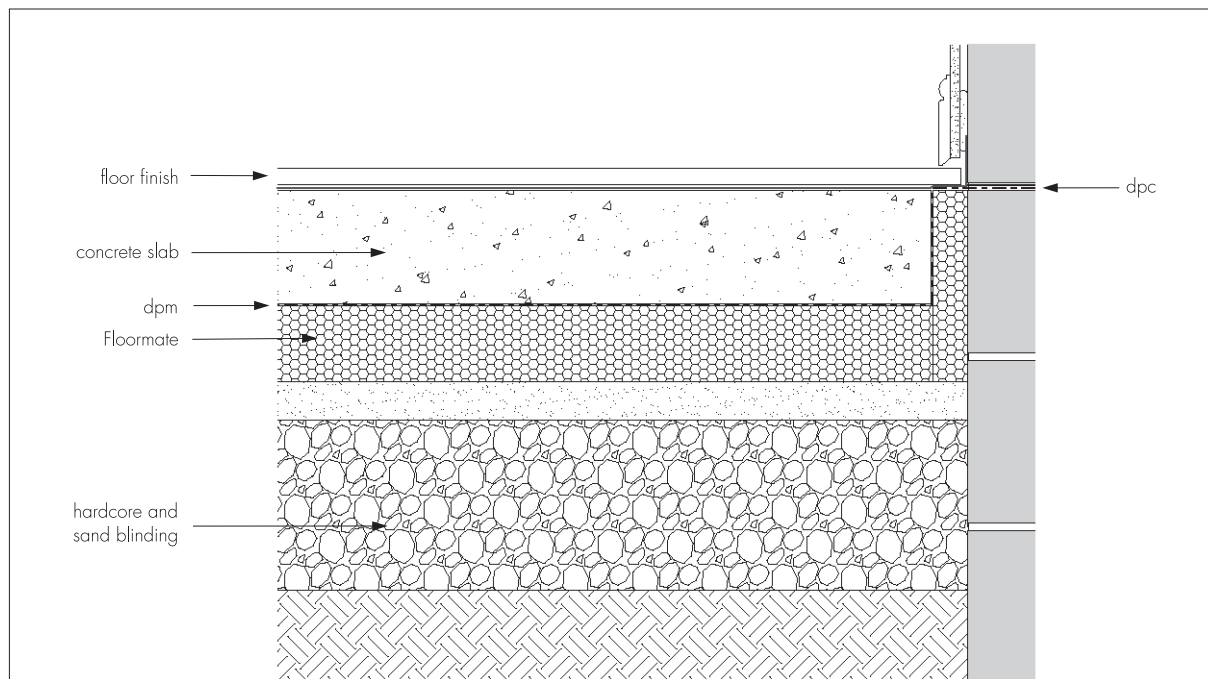
12.5 Where the insulation is used over ground-supported concrete floor slabs (see Figure 1), a suitable damp-proof membrane (dpm) in accordance with BS 8102 : 2009, should be laid to resist moisture from the ground. If a liquid-type dpm is applied to the slabs, it should be compatible with extruded polystyrene and be allowed to dry out fully before laying the insulation.

Figure 1 Floormate above ground-supported concrete slab



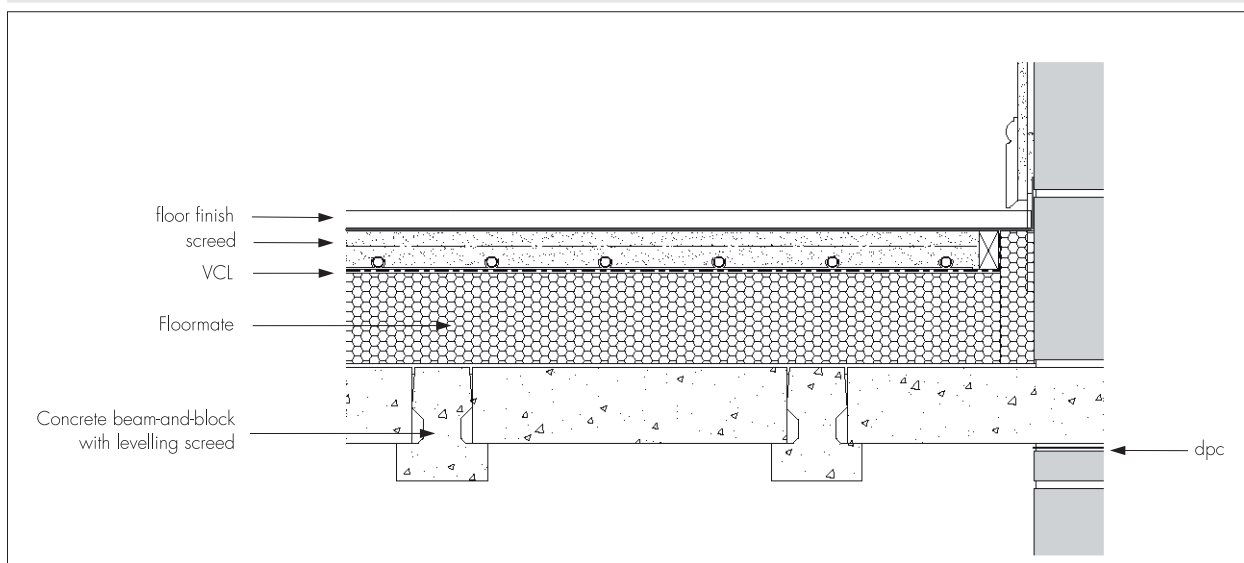
12.6 Where the insulation is used on hardcore bases, beneath ground-supported concrete slabs (see Figure 2), the hardcore must be compacted and blinded before application of the insulation.

Figure 2 Floormate beneath ground-supported concrete slab



12.7 The insulation can either be used on beam-and-block suspended concrete floors (see Figure 3) that are the subject of a current Agrément Certificate, and installed in accordance with and within the limitations imposed by that Certificate, or on floors designed and installed to the precast concrete and general loading codes that have been assessed as suitable.

Figure 3 Floormate above suspended beam-and-block concrete floor



12.8 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. Alternatively, if used, a suitable partial fill cavity wall insulation material can be extended below the damp-proof course (dpc) level to provide edge insulation to the floor.

12.9 The boards and overlays must be protected from water spillage, plaster droppings or traffic, which may damage them during construction. Before laying boards above a dpm, the building should be made substantially weathertight.

13 Procedure

13.1 The boards are cut to size, as necessary, and laid with closely-butted joints.

Cement-based screed overlay

13.2 Perimeter edge pieces are cut and placed around the edges and taped at joints. A properly compacted screed of at least 65 mm is laid. The relevant clauses of BS 8204-1 : 2003, BRE Digest 224 : 1981 and BRE Digest 104 : 1973 should be consulted.

Particle board and oriented strand board (OSB) overlays

13.3 Before laying the particle board or OSB overlays, preservative-treated battens, in accordance with BS 8417 : 2011, are positioned at doorways and to support partitions. Adequate time should be allowed for preservatives to be fixed and the solvents from solvent-based preservatives to evaporate.

13.4 Where the insulation is laid on a dpm, a VCL of polyethylene sheet with a thickness of 0.25 mm (1000 gauge) is laid between the insulation and the particle board. The polyethylene sheet has 150 mm overlaps, taped at the joints and turned up 100 mm at the walls.

13.5 Tongue-and-groove overlay boards, 18 mm thick, are laid with staggered cross-joints.

13.6 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.

13.7 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 particle board.

13.8 Before the particle boards are interlocked, a waterproof PVA adhesive is applied to the joints.

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

13.10 To prevent cold-bridging, a suitable compressible filler, eg pieces of extruded polystyrene, should be fitted around the perimeter of the floor between the particle board and the walls when the wedges are removed, and before the skirting boards are affixed.

13.11 Where there is a likelihood of regular water spillage, eg in rooms such as kitchens, bathrooms, shower and utility rooms, additional protection for the particle board should be considered, eg by the addition of continuous flexible vinyl sheet flooring with welded joints, turned up at abutments and cove skirting.

Concrete slab overlay (ground bearing only)

13.12 Perimeter edge pieces are cut and placed around the edges and taped at joints. The concrete slab is laid to the required thickness.

14 Incorporation of services

14.1 The maximum continuous working temperature of the boards is 75°C. The boards must not be used in direct contact with electrical heating cables or hot water pipes.

Suspended beam-and-block floors

14.2 Where the boards are installed on a floor of a suspended beam-and-block design, all services must be installed in accordance with the relevant BBA Certificate for that floor.

Ground-supported concrete floors

14.3 Where possible, electrical conduits, gas and water pipes or other services should be contained within ducts or channels within the concrete slab. Where this is not possible, the services may be accommodated within the insulation, provided they are securely fixed to the concrete slab. Electrical cables should be enclosed in a suitable conduit. With hot pipes the insulation must be cut back to maintain an air space.

14.4 Where water pipes are installed, either within the slab or the boards, they must be pre-lagged.

Particle board and oriented strand board (OSB) overlays

14.5 For floors incorporating the above overlays, 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, to provide support for a board cover. The duct should be as narrow as possible and not exceed the maximum centres in width as recommended in BS EN 1995-1-1 : 2004, without intermediate support.

Technical Investigations

15 Tests

Tests were carried out by the BBA in accordance with BS EN 13164 : 2012 to determine:

- thickness
- compressive stress at 10% deformation
- long-term water absorption by immersion (total and partial)
- long-term water absorption by diffusion
- thermal conductivity (λ_D value)
- dimensional stability under constant normal laboratory conditions
- dimensional stability at specified temperature and humidity
- compressive creep
- freeze-thaw resistance.

16 Investigations

16.1 The manufacturing process was examined, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

16.2 An examination was made of test data to BS EN 13164 : 2008 relating to:

- dimensions
- squareness
- flatness
- density
- thermal conductivity (λ_D value)
- compressive strength at 10% compression
- bending strength.

Bibliography

- BS 5250 : 2011 *Code of practice for control of condensation in buildings*
- BS 8102 : 2009 *Code of practice for protection of below ground structures against water from the ground*
- BS 8203 : 2001 *Code of practice for installation of resilient floor coverings*
- BS 8204-1 : 2003 *Screeds, bases and in-situ floorings — Concrete bases and cement sand levelling screeds to receive floorings — Code of practice*
- BS 8204-2 : 2003 *Screeds, bases and in-situ floorings — Concrete wearing surfaces — Code of practice*
- BS 8215 : 1991 *Code of practice for design and installation of damp-proof courses in masonry construction*
- BS 8417 : 2011 *Preservation of wood — Code of practice*
- BS EN 1991-1-1 : 2002 *Eurocode 1: Actions on structures — General actions — Densities, self-weight, imposed loads for buildings*
- NA to BS EN 1991-1-1 : 2002 *UK National Annex to Eurocode 1: Actions on structures — General actions — Densities, self-weight, imposed load for buildings*
- BS EN 1991-1-7 : 2006 *Eurocode 1: Actions on structures — General actions — Accidental actions*
- NA to BS EN 1997-1-7 : 2006 *UK National Annex to Eurocode 1: Actions on structures — General actions — Accidental actions*
- BS EN 1995-1-1 : 2004 *Eurocode 5 : Design of timber structures — General — Common rules and rules of buildings*
- BS EN 12871 : 2010 *Wood-based panels — Performance specifications and requirements for load bearing boards for use in floors, walls and roofs.*
- BS EN 13164 : 2008 *Thermal insulation products for buildings. Factory made extruded polystyrene foam (XPS) products — Specification*
- BS EN 13164 : 2012 *Thermal insulation products for buildings — Factory made extruded polystyrene foam (XPS) products — Specification*
- BS EN 13501-1 : 2007 *Fire classification of construction products and building elements — Classification using test data from reaction to fire tests*
- 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*
- BS EN ISO 10456 : 2007 *Building materials and products — Hydrothermal properties — Tabulated design values and procedures for determining declared and design thermal values*
- BS EN ISO 13370 : 2007 *Thermal performance of buildings — Heat transfer via the ground — Calculation methods*
- CP 102 : 1973 *Code of practice for protection of buildings against water from the ground*
- BRE Digest 104 : 1973 *Floor screeds*
- BRE Digest 224 : 1981 *Cellular Plastics for Buildings. Floors*
- BRE Information Paper IP 1/06 *Assessing the effects of thermal bridging at junctions and around openings*
- BRE Report (BR 262 : 2002) *Thermal insulation : avoiding risks*
- BRE Report (BR 443 : 2006) *Conventions for U-value calculations*

17 Conditions

17.1 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.

17.2 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.

17.3 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.

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

17.5 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.

17.6 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.