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Agrément Certificate No 02/3919

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

Designated by Government to issue European Technical Approvals

WEATHER DEK 2

Support pour la pose du carrelage
Unter-bau für die Fliesenverlung

Product

- *THIS CERTIFICATE RELATES TO WEATHER DEK 2.*
- *The product is for use as a floor across joists during house construction where the floor is likely to be exposed to the elements prior to installation of the roof.*
- *The product provides temporary protection from the elements and has a peel off removable film.*
- *The product must be installed in accordance with the manufacturer's instructions and the requirements of this Certificate.*

Regulations

1 The Building Regulations 2000 (as amended) (England and Wales)

The Secretary of State has agreed with the British Board of Agrément the requirements of the Building Regulations to which flooring can contribute in achieving compliance. In the opinion of the BBA, Weather Dek 2, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements.

Requirement:	**Regulation 7**	Materials and workmanship
Comment:		The product is acceptable. See section 12 of this Certificate.
Requirement:	**A1**	Loading
Comment:		The product has sufficient strength and stiffness to sustain and transmit the design load, without excessive deflection, to the primary structure. See sections 7.2 and 9 of this Certificate.
Requirement:	**B3(1) and (3)**	Internal fire spread (structure)
Comment:		The construction detailed in section 8.2 of this Certificate has been assessed as having a fire resistance rating of 30 minutes' loadbearing capacity, 15 minutes' integrity and 15 minutes' insulation. The product has a Class 3 surface. See section 8.1 of this Certificate.

2 The Building Standards (Scotland) Regulations 1990 (as amended)

In the opinion of the BBA, Weather Dek 2, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Regulations and related Technical Standards as listed below.

Regulation:	10	Fitness of materials and workmanship
Standards:	B2.1 and B2.2	Selection and use of materials, fittings, and components, and workmanship
Comment:		The product is a durable material. See section 12 of this Certificate.
Regulation:	11	Structure
Standard:	C2.1	Stability
Comment:		The product has sufficient strength and stiffness to sustain and transmit the design load, without excessive deflection, to the primary structure. See sections 7.2 and 9 of this Certificate.
Regulation:	12	Structural fire precautions
Standard:	D2.1	Structural protection — Principles
Comment:		The construction detailed in section 8.2 of this Certificate has been assessed as having a fire resistance rating of 30 minutes' loadbearing capacity, 15 minutes' integrity, and 15 minutes' insulation.
Standards:	D6.1 to D6.4	Concealed spaces — Principles
Comment:		Cavity barriers must be provided in accordance with the requirements for the product, which has a high risk surface. See section 8.1 of this Certificate.

3 The Building Regulations (Northern Ireland) 2000

In the opinion of the BBA, Weather Dek 2, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Building Regulations as listed below.

Regulation:	B2	Fitness of materials and workmanship
Comment:		The product is a durable material. See section 12 of this Certificate.
Regulation:	D1	Stability
Comment:		The product has sufficient strength and stiffness to sustain and transmit the design load, without excessive deflection, to the primary structure. See sections 7.2 and 9 of this Certificate.
Regulation:	E4(1)	Internal fire spread — Structure
Comment:		The construction detailed in section 8.2 of this Certificate has been assessed as having a fire resistance rating of 30 minutes' loadbearing capacity, 15 minutes' integrity, and 15 minutes' insulation.
Regulation:	E4(3)	Internal fire spread — Structure
Comment:		The product has a Class 3 surface. See section 8.1 of this Certificate.

4 Construction (Design and Management) Regulations 1994 (as amended)
Construction (Design and Management) Regulations (Northern Ireland) 1995 (as amended)

Information in this Certificate may assist the client, planning supervisor, designer and contractors to address their obligations under these Regulations.

See sections:	6 *Delivery and site handling* (6.2), 10 *Slip resistance*, 13 *Installation* and 14 *Supervision and workmanship*.

Technical Specification

5 Description

5.1 Weather Dek 2 is manufactured from P5[1] flooring grade chipboard[2] faced on one side with a cross-oriented, laminated polyethylene peel-off film.

(1) P7 grade chipboard available to special order.

(2) Manufactured to BS EN 312-1 : 1997.

5.2 The product has characteristics of:

thickness (mm)	18, 22
length (mm)	2400
width (mm)	600
density (kgm^{-3})	720 to 740
edge profile	tongue-and-groove

5.3 In the manufacturing process, the chipboard, laminate and the adhesive are brought together under controlled pressure, temperature and line speed.

5.4 Ancillary components comprise:

Weather Dek 2 water-resistant tape and applicator
Weather Dek 2 jointing adhesive — PVA (to BS EN 204 : 1991 Class D3).
Weather Dek 2 bonding adhesive and applicator gun (Fast-Fix System)
Weather Dek 2 nails for use with I beams.

5.5 Quality control on the raw materials and finished product is carried out and includes:

appearance
film to board bond strength
adhesive weights.

6 Delivery and site handling

6.1 Each polythene sheeted, banded pack contains a label bearing the product name, board thickness and type. A fixing instruction sheet is inserted into each pack.

6.2 The panels are supplied in pack sizes given in Table 1.

Table 1 Pack sizes

Thickness (mm)	No of panels per pack	Approx weight (tonne)
18	68	1.3
22	56	1.3

6.3 Boards should be stored off the ground, preferably on bearers, to allow air to circulate. If stored outside the boards should be protected using weatherproof sheeting.

Design Data

7 General

7.1 Weather Dek 2 is a flooring product that can be left exposed to the elements for a typical period of five to six weeks during the building process.

7.2 It provides a tough, moisture-resistant surface, suitable for joisted floors.

7.3 When tested the board shows compliance to Class 1, formaldehyde specification given in BS EN 312-1 : 1997.

8 Behaviour in relation to fire

8.1 The classification of the chipboard under BS 476-7 : 1997 is Class 3 surface spread of flame.

8.2 An intermediate floor construction incorporating tongue-and-groove Weather Dek 2 panels supported on timber joists at least 37 mm wide, a ceiling of 12.5 mm thick plasterboard fixed with 40 mm long galvanized nails at 150 mm centres, joints taped and filled, and backed by timber have been assessed as having a fire resistance rating (in minutes) of:

loadbearing capacity	30
integrity	15
insulation	15

8.3 Where any other form of floor construction incorporating the panel is subject to fire resistance requirements, an appropriate assessment or test must be carried out by a United Kingdom Accreditation Service (UKAS) laboratory accredited for the test concerned.

9 Impact resistance

When tested to BS EN 1128 : 1996, the boards performed in a satisfactory manner.

10 Slip resistance

Slip resistance values indicate that in dry conditions, the Weather Dek 2 panels will provide a satisfactory performance and that a wet surface will provide a marginal performance (see *Installation* section of this Certificate). The results of the performance tests and the classification of slip resistance are given in Table 2.

Table 2 Slip resistance(1)

Results of test	4S rubber (shoes) SRV	Classification
—	<25	dangerous
26 (wet)	25–34	marginal
45 (dry)	35–64	satisfactory
—	>64	excellent

(1) TRL pendulum test.

11 Resistance to standing water

11.1 When tested in accordance with a BBA test method, a constructed floor performed in a satisfactory manner. All joints and nail heads should be taped.

11.2 In persistently wet conditions, some water penetration may be expected. This could result in some swelling around joints and nail fixings.

12 Durability

The durability of the material is satisfactory. Provided the board is used in accordance with the Certificate holder's instructions, and is fixed to satisfactory, stable and durable substrates, the product should have a life equal to the building in which it is installed. Under normal conditions of occupancy it is unlikely to suffer damage, but if damage does occur, repairs can be carried out by following the Certificate holder's advice.

Installation

13 General

Design considerations

13.1 Future access to any pipes and services running between joists should be ensured. Traps for this purpose should be supported on all sides.

13.2 The floor decking operation must take place in the dry.

13.3 On joists up to 450 mm centres, 18 mm panels may be used but on joists up to 610 mm centres, 22 mm panels must be used.

Laying

13.4 The tongue-and-groove flooring panels should be laid on top of the joists with the longest edges at right angles. Short end joints should be staggered by approximately half a board in a brick bond pattern with these ends falling on the centre line of the joist (see Figure 1). If they overhang, additional timber supports or noggings should be provided. Although long edges need no intermediate support between joists, support noggings should be fixed at floor perimeters where unsupported edges abut a wall.

13.5 Laying should start with a single row of panels parallel to the longest wall allowing for a suitably-sized expansion gap. A minimum gap of 10 mm or 2 mm per metre run of floor, whichever is the greater, should be left against all walls and abutments. Particular attention must be paid to maintaining expansion gaps at all times during construction. When large single-run floors are being laid, it is necessary to incorporate intermediate expansion gaps to allow for possible movement. The second row should start with a half panel to ensure all cross joints are staggered, the floor forming the brick bond pattern (see Figure 1).

Fixing

13.6 Prior to fixing ensure that there is no standing water or moisture on the joists.

13.7 A liberal application of Weather Dek 2 jointing adhesive, should be made to the groove of the profile joint to the edges of each panel to ensure that the entire joint is bonded. Once the panels are butted tightly together, (see Figure 2) any extruded residues should be removed with a damp cloth.

Method 1 — Mechanical Fixing

13.8 Panels should be glued to the joists and noggings using a Weather Dek 2 jointing adhesive and fixed using 10 gauge annular ring-shank nails of length 2.5 times the thickness of the panel, at a rate of four nails per joist and hammered flush with the surface of the panel.

13.9 Where nailing could damage ceilings or joists, panels should be fixed using countersunk screws in pre-drilled holes.

Method 2 — Fast-Fix Bonding System

13.10 Weather Dek 2 Fast Fix bonding adhesive is laid in 4 mm beads using the applicator along the centre of the floor beams ensuring a smooth run by applying consistent pressure. Runs of 600 mm should be laid to complete the first run of boards.

13.11 The first run of boards are placed into position square avoiding any unnecessary dragging which will disturb the adhesive. The first run should be levelled with a line, and a row of annular ring-shank nails 2.5 times the board thickness should then be fixed along the perimeter 50 mm from the board edges.

13.12 The boards should then be held in place by secret nailing through the tongue of the long edge at 20° to the vertical. One annular ring-shank nail should be fixed in every second joist. The floor deck can then be walked on.

13.13 The second and subsequent rows of boarding should be fixed in the same way, (with the exception of nailing through the board surface). The last row of boarding is fixed to the joist with one nail per joist as specified in section 13.11.

13.14 When using Weather Dek 2 in combination with engineered I beams, Weather Dek 2 nails should be used.

13.15 The floor deck can be walked on immediately after fixing but further heavy construction work should be avoided for 24 hours.

Figure 1 Laying pattern

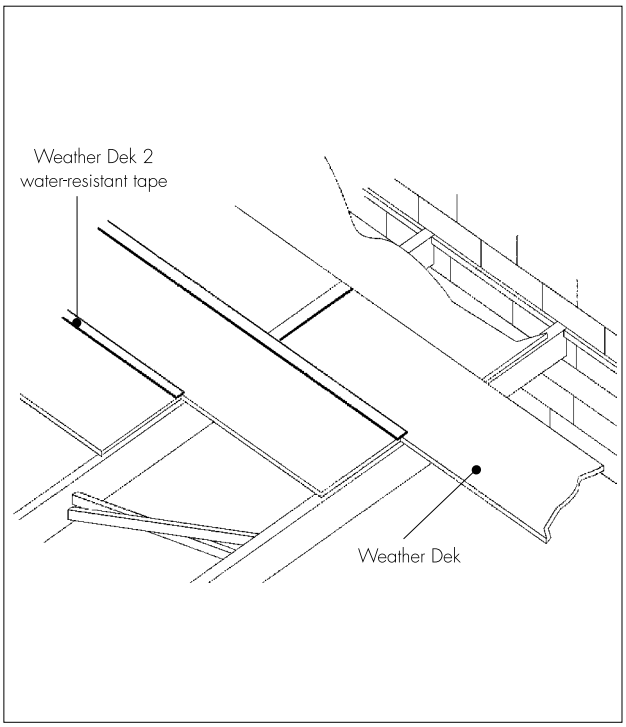
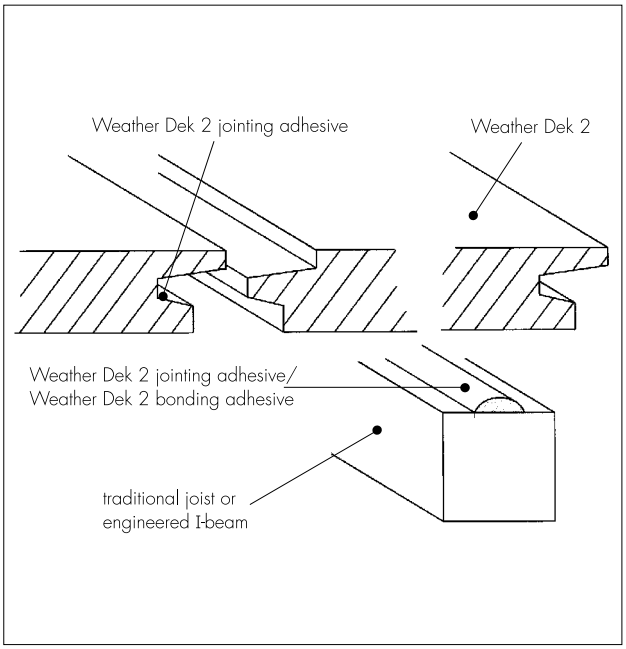


Figure 2 Glueing



Sealing

13.16 Immediately a run of panels is fixed, all board joints, nail runs and exposed edges around the perimeter are sealed with Weather Dek 2 water-resistant tape using the applicator. This operation should be carried out under dry conditions.

Finishing

13.17 If the board surface or edge tape is damaged during the construction period it should be repaired immediately.

13.18 The product tolerates wet conditions but these may have an adverse effect on site safety.

13.19 When all construction and decoration work is complete and the building is weather tight, the deck should be swept down and the peel-off covering removed by pulling firmly but slowly from the short end. A sharp knife should be used around the perimeter to free any of the covering which may have become snagged.

14 Supervision and workmanship

14.1 The level of supervision during installation of the Weather Dek 2 and the associated structure must be sufficient to ensure the quality of workmanship described in BS 8000-5 : 1990.

14.2 Before the start of work on the installed floor, during periods of severe weather it is advisable to remove any pools of standing water, should they occur.

Technical Investigations

The following is a summary of the technical investigations carried out on Weather Dek 2.

15 Tests

Tests were conducted to determine:

dimensional accuracy of panels
squareness of panels
resistance to abrasion
tear resistance of Weather Dek 2 film and Weather Dek 2 tape
resistance to peel
standing water resistance
resistance to hard body impact in accordance with BS EN 1128 : 1996
water resistance of Weather Dek 2 tape
slip resistance in wet and dry conditions in accordance with the TRL pendulum test
water resistance and adhesion characteristics of Weather Dek 2 jointing and bonding adhesives.

16 Other investigations

16.1 An examination was made of data relating to:

surface spread of flame to BS 476-7 : 1997.

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

16.3 A site in progress was examined to establish the practicability of installation.

16.4 A user survey of builders who had used Weather Dek 2 was conducted to establish the practicability of installation and performance in use.

Bibliography

BS 476-7 : 1997 *Fire tests on building materials and structures — Method of test to determine the classification of the surface spread of flame of products*

BS 8000-5 : 1990 *Workmanship on building sites — Code of practice for carpentry, joinery and general fixings*

BS EN 204 : 1991 *Classification of non-structural adhesives for joining of wood and derived timber products*

BS EN 312-1 : 1997 *Particleboards — Specifications — General requirement for all board types*

BS EN 1128 : 1996 *Cement-bonded particleboards — Determination of hard body impact resistance*

Conditions of Certification

17 Conditions

17.1 This Certificate:

(a) relates only to the product that is described, installed, used and maintained as set out in this Certificate;

(b) is granted only to the company, firm or person identified on the front cover — no other company, firm or person may hold or claim any entitlement to this Certificate;

(c) has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective;

(d) is copyright of the BBA.

17.2 References in this Certificate to any Act of Parliament, Regulation made thereunder, Directive or Regulation of European Union, Statutory Instrument, Code of Practice, British Standard, manufacturers' instructions or similar publication, shall be construed as references to such publication in the form in which it was current at the date of this Certificate.

17.3 This Certificate will remain valid for an unlimited period provided that the product and the manufacture and/or fabricating process(es) thereof:

(a) are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA.

(b) continue to be checked by the BBA or its agents; and

(c) are reviewed by the BBA as and when it considers appropriate.

17.4 In granting this Certificate, the BBA makes no representation as to:

(a) the presence or absence of any patent or similar rights subsisting in the product or any other product:

(b) the right of the Certificate holder to market, supply, install or maintain the product; and

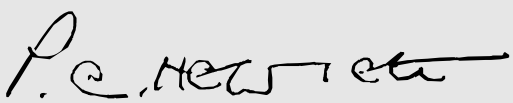
(c) the nature of individual installation of the product, including methods and workmanship.

17.5 Any recommendations relating to the use or installation of this product which are contained or referred to in this certificate are the minimum standards required to be met when the product is used. They do not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date of this Certificate or in the future; nor is conformity with such recommendations to be taken as satisfying the requirements of the 1974 Act or of any present or future statutory, common law or other duty of care. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the installation and use of this product.

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

In the opinion of the British Board of Agrément, Weather Dek 2 is fit for its intended use provided it is installed, used and maintained as set out in this Certificate. Certificate No 02/3919 is accordingly awarded to Puhos Board (UK) Ltd.

On behalf of the British Board of Agrément



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Chief Executive

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