CI/SfB
(23.9) (P3)

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

Designated by Government to issue European Technical Approvals

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**Agrément Certificate No 94/2988**
*Second issue**

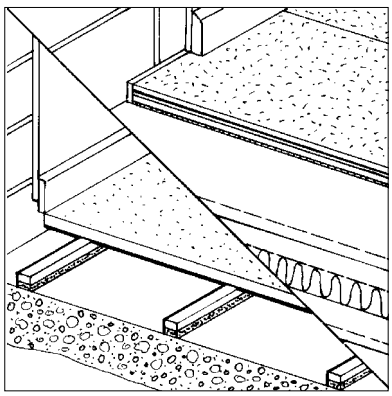
# PROFLOOR DYNAMIC FLOORING SYSTEMS

Lambourdes isolantes pour planchers
Bodenlatten für Schalldämpfung

## Product

- *THIS CERTIFICATE RELATES TO PROFLOOR DYNAMIC FLOORING SYSTEMS FOR REDUCING SOUND TRANSMISSION THROUGH SEPARATING FLOORS.*

*These Front Sheets must be read in conjunction with the accompanying Detail Sheets.*



## Regulations – Detail Sheet 1

### 1 The Building Regulations 1991 (as amended 1994) (England and Wales)

The Secretary of State has agreed with the British Board of Agrément the aspects of performance to be used by the BBA in assessing the compliance of acoustic flooring with the Building Regulations. In the opinion of the BBA, Profloor Dynamic Flooring Systems, if used in accordance with the provisions of this Certificate, will meet or contribute towards meeting the relevant requirements.

| | | |
|---|---|---|
| Requirement: | E2 | Airborne sound (floors and stairs) |
| Requirement: | E3 | Impact sound (floors and stairs) |
| Comment: | | When installed on a suitable floor, the systems can satisfy these Requirements. See marked sections of relevant Detail Sheet. |
| Requirement: | Regulation 7 | Materials and workmanship |
| Comment: | | The product is acceptable. See marked sections of relevant Detail Sheet. |

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

In the opinion of the BBA, Profloor Dynamic Flooring Systems, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Regulations and Technical Standards as listed below.

| | | |
|---|---|---|
| **Regulation:** | 10 | Fitness of materials |
| Standard: | B2.1 | Selection and use of materials and components |
| Comment: | | The product is acceptable. |
| **Regulation:** | 20 | Resistance to transmission of sound |
| Standard: | H2.1 | Airborne sound |
| Standard: | H2.2 | Impact sound |
| Comment: | | When installed on a suitable floor, the systems can satisfy these Standards. See marked sections of relevant Detail Sheet. |

### 3 The Building Regulations (Northern Ireland) 1994 (as amended 1995)

In the opinion of the BBA, Profloor Dynamic Flooring Systems, 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 systems are acceptable. See marked section of relevant Detail Sheet. |
| Regulation: | G2 | Separating walls and separating floors |
| Comment: | | When installed on a suitable floor, the systems can satisfy this Regulation. See marked sections of relevant Detail Sheet. |

## Conditions of Certification

### 4 Conditions

4.1 Where reference is made in this Certificate to any Act of Parliament, Regulation made thereunder, Statutory Instrument, Code of Practice, British Standard, manufacturer's instruction or similar publication, it shall be construed as reference to such publication in the form in which it is in force at the date of this Certificate.

4.2 The quality of materials and the method of manufacture have been examined and found satisfactory by the BBA and must be maintained to this standard during the period of validity of this Certificate. This Certificate will remain valid for an unlimited period provided:

(a) the specification of the product is unchanged; and

(b) the manufacturer continues to have the product checked by the BBA.

4.3 This Certificate will apply only to the product that is installed, used and maintained as set out in this Certificate.

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

(a) the presence or absence of patent or similar rights subsisting in the product; and

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

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

4.5 It should be noted that any recommendations relating to the safe use 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 or Common Law duties of care, or of any duty of care which 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 or Common Law duties 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 use of this product.

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

In the opinion of the British Board of Agrément, Profloor Dynamic Flooring Systems are fit for their intended use provided they are installed, used and maintained as set out in this Certificate. Certificate No 94/2988 is accordingly awarded to A. Proctor Developments Ltd.

On behalf of the British Board of Agrément

Date of Second issue: 20th October 1997 Director

**Original Certificate issued 18th February 1994. This amended version includes reference to the revised Building Regulations and new* Conditions of Certification.

British Board of Agrément
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For technical or additional information, contact the Certificate holder (see front page).
For information about the Agrément Certificate, including validity and scope, tel: Hotline 01923 665400, or check the BBA website.

CI/SfB
(23.9) Hy (P3)

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

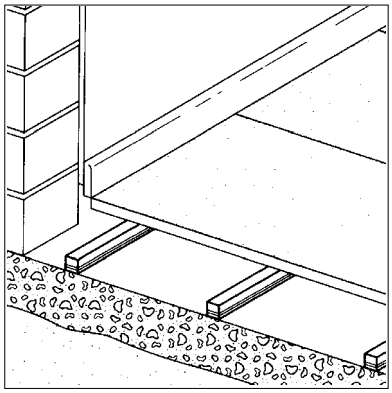
**A. Proctor Developments Ltd**

**Certificate No 94/2988**

**DETAIL SHEET 2**
*Second issue**

# PROFLOOR DYNAMIC BATTEN

## Product



- *THIS RELATES TO PROFLOOR DYNAMIC BATTEN FOR REDUCING SOUND TRANSMISSION THROUGH SEPARATING FLOORS.*
- *The product is a foam backed timber batten and is for use in conjunction with tongue-and-groove chipboard type C4(M) to BS 5669 : Part 2 : 1989 and Part 5 : 1993.*
- *It is used to reduce impact and airborne sound transmission through separating floors in dwellings and flats.*
- *It is essential that the floors comply with the conditions set out in the* Design Data *and* Installation *parts of this Certificate.*

*This Detail Sheet must be read in conjunction with the Front Sheets, which give the product's position regarding the Building Regulations and the* Conditions of Certification.

## Technical Specification

### 1 Description

1.1 Profloor Dynamic Batten comprises a softwood batten with a two-layer foam backing (see Figure 1). The polyethylene foam layer has a nominal density of 33 kgm$^{-3}$ and the polyurethane layer has a density of 32 kgm$^{-3}$.

1.2 Standard battens are available in lengths of 1.8 m or 3.6 m and widths of 45 mm. The depth is either 55 mm or 67 mm and includes 10 mm thick polyethylene and 12 mm thick polyurethane foam systems. Other batten dimensions, including plywood, are available to special order.

1.3 Quality control checks are carried out regularly at each stage of production.

1.4 Ancillary materials include Profloor Flanking Strip, for use between skirting and flooring and around pipes, and Profloor Adhesive (see Figure 2).

*Figure 1 Profloor Dynamic Batten*

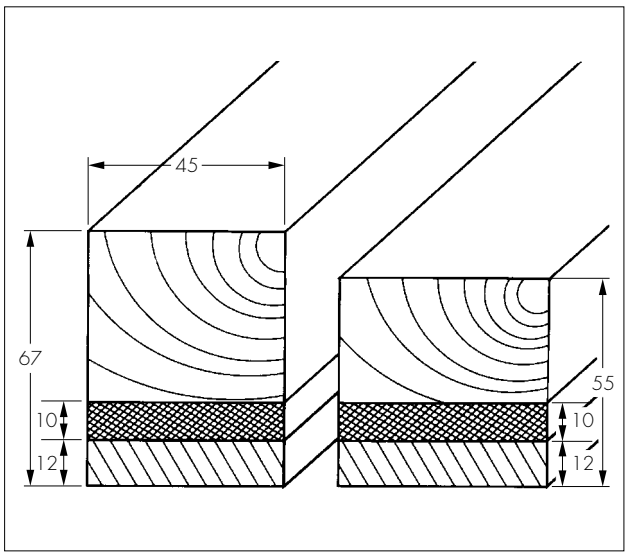
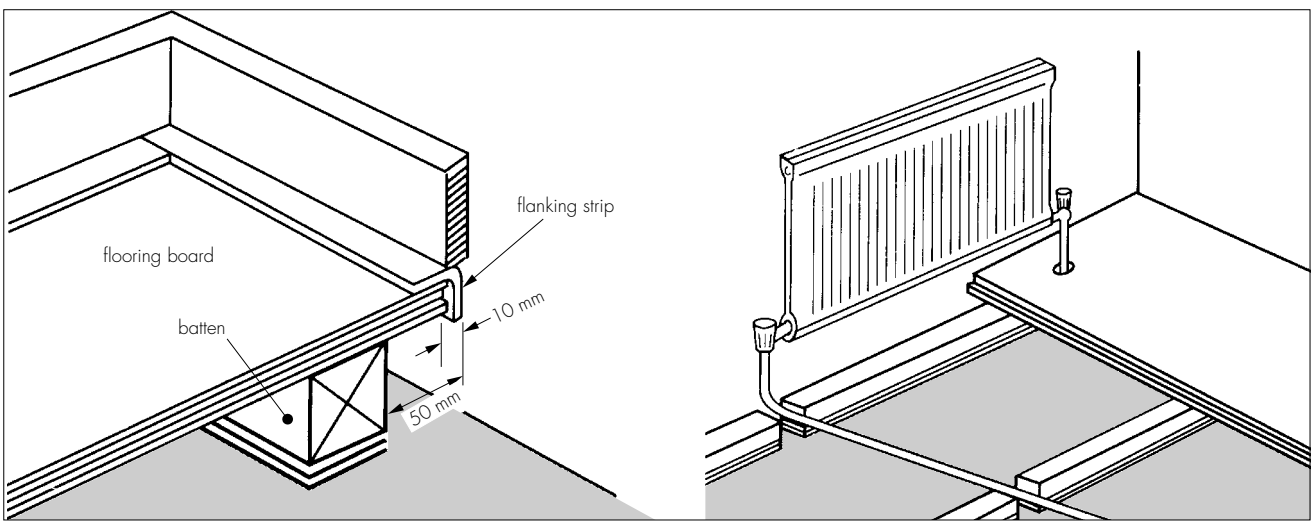



*Figure 2 Skirting and service details*



## 2 Delivery and site handling

2.1 The battens are packed in bundles of 20. Each bundle bears a lot number.

2.2 A number of bundles are bound with tape bearing the product identity, a lot number and the number of this Certificate.

2.3 The product must be stored under cover, in dry, well ventilated conditions, preferably similar to those it will experience in service.

# Design Data

## 3 General

3.1 Profloor Dynamic Batten is satisfactory for use in dwellings on sound, even bases of:

concrete slab
concrete beams with infill blocks
timber floor with absorbent layer or heavy pugging between joists.

3.2 The battens with a chipboard overlay provide impact and airborne sound insulation for separating floors. They will follow the broad contours of the base and create a void for underfloor services. The product has not been assessed for use on exposed, semi-exposed and ground floors.

3.3 The product is for use with suitable overlays of chipboard type C4(M) to BS 5669 : Part 2 : 1989 and Part 5 : 1993.

## 4 Sound

4.1 The product, when used in conjunction with suitable floor bases, can enable a floor to provide satisfactory impact and airborne sound insulation.

4.2 Measures to be taken in design and during installation to avoid direct paths for airborne sound and to minimise flanking sound transmission are given in the national Building Regulations and Standards detailed below:

*England and Wales*

Approved Document E.

*Scotland*

Part H of the provisions deemed to satisfy the Technical Standards.

*Northern Ireland*

Technical Booklet G.

4.3 For concrete floor bases of the type listed in section 3.1 these measures include fully grouted joints, no air paths and a minimum mass of 300 $kgm^{-2}$.

4.4 For timber floor bases with the batten placed over the joist, the construction should comply with Floor type B and C as specified in the appropriate regulatory document referred to in section 4.2, and shown by Figure 3 of this Detail Sheet.

4.5 Constructions other than those detailed in sections 4.3 and 4.4 can provide satisfactory airborne and impact sound insulation, and guidance is given in the national Building Regulations and Standards as detailed below:

*England and Wales*

Approved Document E, Sections 3 and 6.

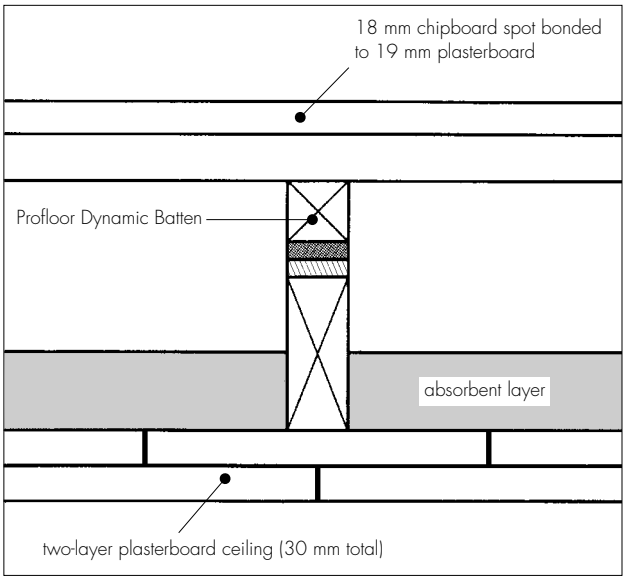
*Scotland*

Suitable evidence of satisfactory sound insulation will be required. For example, testing in accordance with the procedures detailed in Sections 19 to 29 of the deemed-to-satisfy provisions for Standard H2 of the Technical Standards.

*Northern Ireland*

Technical Booklet G, Section 2, on the permissible differences between proposed and tested constructions where equivalent performance is claimed.

*Figure 3 Timber ribbed floor construction with absorbent layer*




## 5 Floor loading

5.1 The design loadings for self-contained dwelling units, as defined in BS 6399 : Part 1 : 1996, are:

| | |
|---|---|
| intensity of distributed load (kPa) | 1.5 |
| concentrated load (kN) | 1.4 |

5.2 The flooring with battens at centres and/or perimeter battens, as described in section 10, can support these design loadings. An indication of expected deflections is given in Table 1.

5.3 A BRE survey of imposed floor loading in domestic buildings (see BRE current paper No 2/77 *Floor loadings in domestic buildings — the results of a survey)* indicates that loadings in flats are commonly in the region of 0.6 kPa and loadings of 1.5 kPa are normally associated with fixed items.

5.4 Batten spacing closer than that recommended in BS 8201 : 1987 and/or support battens may be necessary where heavy items such as washing machines and freezers are to be located.

5.5 Where the battens are used under lightweight non-loadbearing partitions it is essential that double rows are used or a ladder layout directly below the partition. In cases of doubt the advice of the Certificate holder should be sought.

5.6 Under normal traffic loading the system is slightly resilient due to compression of the foam layers.

## 6 Underfloor services

6.1 The battens have not been assessed for use with underfloor heating systems.

6.2 Water pipes present in the void formed by the system must be lagged.

6.3 The position of services under the floor system must be designed to ensure adequate space for the perimeter batten to be placed 50 mm from the wall.

6.4 If the short ends of the flooring fall between the line of battens, an appropriate length of Profloor Dynamic Batten or Profloor Support Batten should be placed to support the joint.

6.5 Where access is required to services under the floor for maintenance purposes, access panels should be provided. These should be supported by the insertion of additional lengths of Profloor Dynamic Batten or Profloor Support Batten.

### 7 Durability

The product will perform satisfactorily and provide impact sound insulation for the life of the flooring provided it is installed in accordance with the recommendations of this Certificate.

## Installation

### 8 General

8.1 The surface irregularities of concrete floors or screeds should not exceed:

5 mm under a 3 m straight-edge
±15 mm over large open areas.

8.2 Installation should not commence until the building is weatherproof and wet trades complete and dried out.

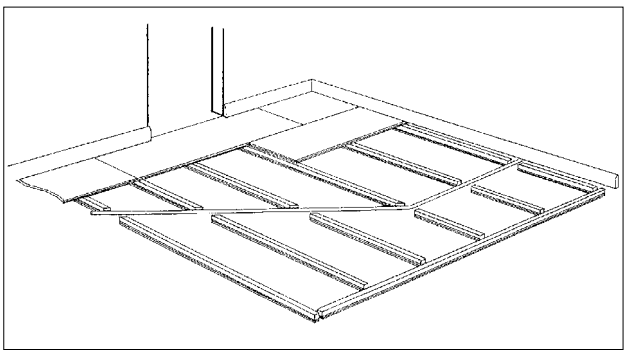
8.3 Flooring boards should be acclimatised to site conditions before fixing.

### 9 Placing battens

9.1 Battens should be laid foam downwards in accordance with BS 8201 : 1987.

9.2 Battens, at 450 mm or 600 mm centres when using 18 mm or 22 mm type C4(M) wood chipboard, respectively, should be placed foam downwards on the floor. Batten ends are lightly butted and staggered between adjacent rows. For floors supporting heavy loads, perimeter support battens should be used and other battens spaced more closely (see section 5 and Figure 4).

*Figure 4 Batten layout*



9.3 A gap of 50 mm should be left between the wall and the batten around the perimeter of the room. A gap should be left between the wall head and the batten and Profloor Flanking Strip should be fitted beside the batten at the same time (see Figure 2).

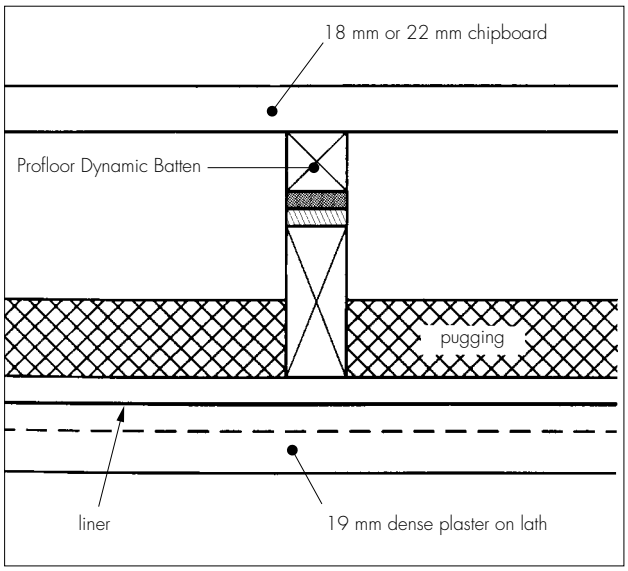
9.4 Where the floor surface does not achieve the permissible deviations defined in section 8.1, as a limited measure isolating packing strips can be placed under the battens to stabilise the floor where necessary. If packing is used it should be secured to the foam, for example with a suitable adhesive. Minor irregularities may be levelled with mortar.

9.5 For floors exceeding 150 $m^2$, or where the camber is greater than 20 mm, advice should be sought from the manufacturer.

9.6 Where pipes/services obstruct the normal batten spacing the battens should be cut through and placed either side of the obstruction, leaving a gap, or placing Profloor Flanking Strip around it. Care should be taken not to allow service pipes to touch the batten system. Services should be isolated with flanking strip to prevent contact with the flooring panel (see Figure 2).

9.7 For timber floors battens have to be set longitudinally on the joists (see Figure 5), or if a suitable platform is used, the battens can be placed either longitudinally on joists or perpendicular to the joists.

*Figure 5 Timber ribbed floor construction with pugging*




### 10 Flooring

10.1 Flooring is placed across the battens and fixed using twisted shank nails, ring shank nails or woodscrews at not more than 300 mm centres. It must be ensured that the length of the fixing is not less than 2.5 times the thickness of the flooring, and does not penetrate through the batten and into the foam layers. If plywood or small battens are used these may be glued not nailed.

10.2 The ends of the boards in one row must be at least 150 mm from the ends of the boards in the adjoining row.

10.3 Before the boards are interlocked, Profloor Adhesive is applied to the joints. Surplus adhesive should be removed from the surface with a damp cloth before it dries.

10.4 When fitting up to skirting or wall, boarding must not touch any part of the structural walls and a gap must be allowed for sealing with flanking strip.

10.5 The skirting should be fixed to the wall on top of the flanking strip, which should be trimmed once skirtings are in place. The flanking strip should also be placed between the door frame and finished floor.

10.6 An expansion gap between flooring boards 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.

10.7 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 board.

10.8 A protective layer should be laid immediately after the floor is installed to protect the surface and prevent damage by other trades.

10.9 Where there is a likelihood of regular water spillage, eg in rooms such as kitchens, bathrooms, shower and utility rooms, protection should be considered, for example, by the use of flexible vinyl sheet flooring with welded joints and cove skirtings.

## Technical Investigations

The following is a summary of the technical investigations carried out on Profloor Dynamic Batten.

### 11 Tests

11.1 An evaluation was made of tests carried out in accordance with BS 2750 : Parts 4 and 7 : 1980 and BS 5821 : Parts 1 and 2 : 1984.

11.2 An evaluation was made of tests and data relating to the effects of long-term loading on the laminate of polyethylene and polyurethane foams. It is estimated that the deflections given in Table 1 may be expected under various loads.

*Table 1 Deflections*

| Feature | Expected deflection at centre span (mm) |
|---|---|
| 18 mm chipboard, battens at 400 mm centres | 0.6 |
| 22 mm chipboard, battens at 600 mm centres | 1.3 |
| distributed load 0.6 kPa | 4.0 |
| distributed load 1.5 kPa | 5.5 |
| concentrated load 1.4 kN | 5.8 |

11.3 Tests were carried out to establish:

hygrothermal movement
cohesive strength
fatigue
creep.

### 12 Investigations

12.1 A user survey was conducted to evaluate performance in use.

12.2 An assessment was made of properties in relation to fire.

12.3 An assessment was made of data relating to practicability of installation.

## Bibliography


BS 2750 *Measurement of sound insulation in buildings and of building elements*
Part 4 : 1980 *Field measurements of airborne sound insulation between rooms*
Part 7 : 1980 *Field measurements of impact sound insulation of floors*

BS 5669 *Particleboards*
Part 2 : 1989 *Specification for wood chipboard*
Part 5 : 1993 *Code of practice for the selection and application of particleboards for specific purposes*

BS 5821 *Methods for rating the sound insulation in buildings and of building elements*
Part 1 : 1984 *Method for rating the airborne sound insulation in buildings and of interior building elements*
Part 2 : 1984 *Method for rating the impact sound insulation*

BS 6399 *Loading for buildings*
Part 1 : 1996 *Code of practice for dead and imposed loads*

BS 8201 : 1987 *Code of practice for flooring of timber, timber products and wood based panel products*


BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

On behalf of the British Board of Agrément

Date of Second issue: 20th October 1997

Director

**Original Detail Sheet issued 18th February 1994. This amended version includes reference to revised Building Regulations and associated text.*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CI/SfB (23.9) Ry (P3)

**A. Proctor Developments Ltd**

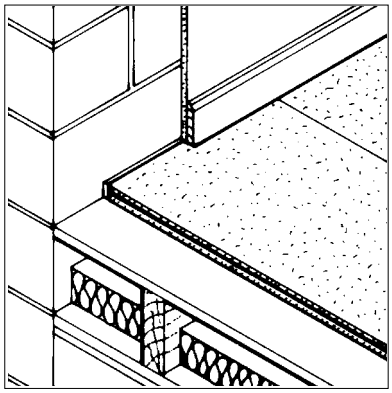
BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

# PROFLOOR MICRO DECK AND PROFLOOR REFURB DECK (STANDARD AND HI-LOAD GRADES)

**Certificate No 94/2988**

**DETAIL SHEET 3**

## Product



- *THIS DETAIL SHEET RELATES TO PROFLOOR MICRO DECK AND PROFLOOR REFURB DECK FLOORING SYSTEMS FOR REDUCING SOUND TRANSMISSION THROUGH SEPARATING FLOORS.*
- *The products are for use as a flooring overlay on concrete or timber boarded floor decks.*
- *They are used to reduce impact and airborne sound transmission through separating floors in dwellings and flats.*
- *It is essential that the floors comply with the conditions set out in the* Design Data *and* Installation *parts of this Certificate.*

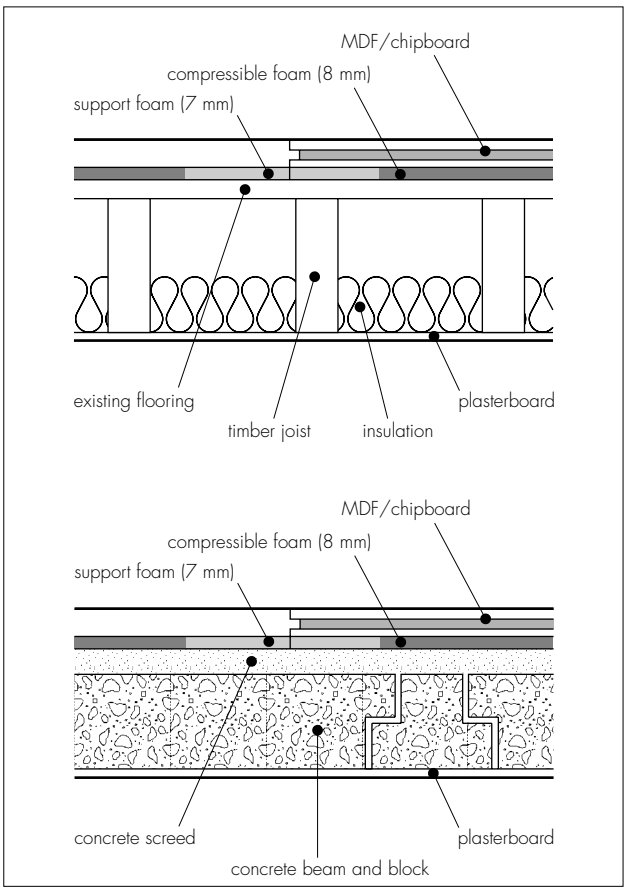
*This Detail Sheet must be read in conjunction with the Front Sheets, which give the products' position regarding the Building Regulations and the* Conditions of Certification.

## Technical Specification

### 1 Description

1.1 Profloor Micro Deck and Profloor Refurb Deck flooring systems comprise a range of rigid tongue-and-groove boards laminated to compressible foams and edged with support foam (see Figure 1).

*Figure 1 Profloor deck construction*




1.2 Each system comprises two grades — Standard and Hi-Load. The nominal characteristics of each product are listed in Table 1.

1.3 The moisture resistant medium density fibreboard (MDF) and moisture resistant chipboard [Type C3(M) or Type C4(M)] satisfy the minimum relevant requirements of BS 1142 : 1989, and BS 5669 : Part 2 : 1989, respectively.

1.4 Quality control checks are carried out regularly during production.

1.5 Ancillary materials include Profloor Flanking/Support Strip, for use between skirting, flooring and around pipes, and Profloor Adhesive.

*Table 1 Nominal characteristics*

| Material | Thickness (mm) | Board size* (mm) | Overall depth (mm) | Weight per board (kg) |
|---|---|---|---|---|
| Micro Deck (Standard): | | | | |
| moisture resistant MDF | 9.0 | 1200 × 600 | 17 | 5.5 |
| compressible polyurethane foam | 8.0 | | | |
| polyethylene support foam | 7.0 | | | |
| Micro Deck (Hi-Load): | | | | |
| moisture resistant MDF | 9.0 | 1200 × 600 | 17 | 5.5 |
| compressible reconstituted polyurethane foam | 8.0 | | | |
| polyethylene support foam | 7.0 | | | |
| Refurb Deck (Standard): | | | | |
| moisture resistant chipboard | 18.0 | 2400 × 600 | 26 | 19.0 |
| compressible polyurethane foam | 8.0 | | | |
| polyethylene support foam | 7.0 | | | |
| Refurb Deck (Hi-Load): | | | | |
| moisture resistant chipboard | 18.0 | 2400 × 600 | 26 | 19.0 |
| compressible reconstituted polyurethane foam | 8.0 | | | |
| polyethylene support foam | 7.0 | | | |

*Other sizes are available to special order.

## 2 Delivery and site handling

2.1 The boards are delivered to site taped individually, in batches of four and/or on pallets in the quantities given in Table 2.

*Table 2 Profloor packaging*

| Product | Boards per carton | Boards per pallet |
|---|---|---|
| Micro Deck Standard and Hi-Load | 4 | max 100 |
| Refurb Deck Standard and Hi-Load | — | max 70 |

2.2 The tape used in the packaging is printed with product name and the BBA identification mark incorporating the number of this Certificate.

2.3 The products must be stored flat under cover, in dry, well ventilated conditions, preferably similar to those they will experience in service.

# Design Data

## 3 General

3.1 Profloor Micro Deck and Profloor Refurb Deck (Standard and Hi-Load grades) flooring overlay systems are satisfactory for use on concrete or timber boarded floor decks in dwellings and flats.

3.2 The products are satisfactory for use on sound, even bases with constructions of:

concrete slab
concrete beams with infill blocks or hollow concrete beams
timber floor with absorbent layer or heavy pugging between joists.

3.3 The products reduce airborne and impact sound transmission through party floors. The products have not been assessed for use on exposed, semi-exposed and ground floors.

3.4 Mechanical fixings must not be used to fix main flooring panels.

## 4 Sound insulation

4.1 The products, when used in conjunction with suitable floor bases, can enable a floor to provide satisfactory impact and airborne sound insulation.

4.2 The measures to be taken in design and during installation to avoid direct paths for airborne sound and to minimise flanking sound transmission are given in the national Building Regulations and Standards as detailed below:

*England and Wales*

Approved Document E.

*Scotland*

Technical Standards, Part H of the provisions deemed to satisfy.

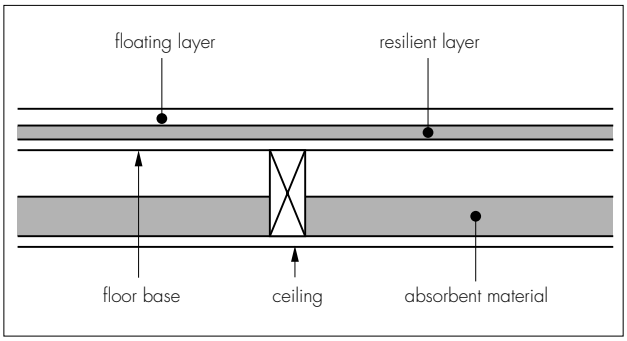
*Northern Ireland*

Technical Booklet G.

4.3 These measures include the use of one of the floor bases listed in 3.2, which have fully grouted joints, are free from air paths, and have a minimum mass of 300 $kgm^{-2}$.

4.4 For timber floor bases with the decks placed over the joists, the construction should comply with the floor constructions shown in the national Building Regulations (see section 4.2 and Figure 2).

*Figure 2 Profloor deck on timber based floor*




4.5 Constructions other than those detailed in Figure 1 can provide satisfactory airborne and impact sound insulation. Guidance is given in national Building Regulations and Standards as detailed below:

*England and Wales*

Approved Document E, Sections 3 and 6.

*Scotland*

Suitable evidence of satisfactory sound insulation will be required. For example, testing in accordance with the procedures detailed in Sections 19 to 29 of the deemed-to-satisfy provisions for Standard H2.

*Northern Ireland*

Technical Booklet G, Section 2, on the permissible differences between proposed and tested constructions where equivalent performance is claimed.

4.6 An isolation gap between the floor and the skirting and wall should also be maintained.

## 5 Properties in relation to fire

When properly installed on fire resistant floors, the boards will not add significantly to any existing fire hazard.

## 6 Floor loading

6.1 The design loadings for self-contained dwelling units as defined in BS 6399 : Part 1 : 1996 are:

| | |
|---|---|
| intensity of distributed load (kPa) | 1.5 |
| concentrated load (kN) | 1.4 |

6.2 The boards can support these design loadings without undue deflection. For concentrated loads in excess of 1.4 kN, for example under a bath,

kitchen unit or night-store heater, the Hi-Load grade is recommended.

6.3 A BRE survey of imposed floor loadings in domestic buildings (see BRE current paper No 2/77 *Floor loadings in domestic buildings — the results of a survey*) indicates that loadings in flats are commonly in the region of 0.6 kPa and loadings of 1.5 kPa are normally associated with fixed items.

## 7 Durability

The products will perform satisfactorily and provide impact and airborne sound insulation for the life of the building provided they are installed in accordance with the recommendations of this Certificate.

# Installation

## 8 General

8.1 Installation should be carried out in accordance with the manufacturer's instructions and should not commence until the building is weatherproof and wet trades complete and dried out.

8.2 The products should be acclimatised to site conditions in service before fixing.

8.3 The concrete floor over which the boards are to be laid should be left as long as possible to maximise drying out, eg the recommendations of BS 8203 : 1996, Section 3.1.2, should be followed. The floor surface should be smooth and flat to within 5 mm when measured with a 3 metre straight-edge. Irregularities greater than this must be removed. Minor irregularities (up to 10 mm) may be levelled with mortar.

8.4 Mechanical fixings must **not** be used to fix main flooring panels.

8.5 It is not recommended that partitions be mounted off Profloor Micro Deck or Profloor Refurb Deck.

8.6 It is imperative that all services are in place prior to laying the boards. Services cannot be accommodated between the boards and the sub-floor.

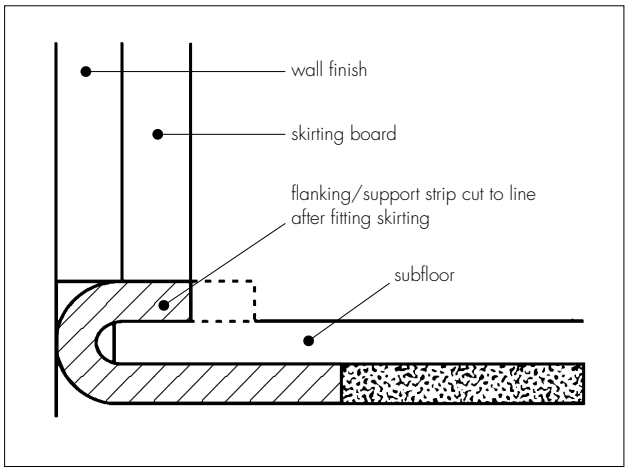
## 9 Procedure

9.1 To ensure perimeter support and isolation of the flooring system Profloor Flanking/Support Strip should be applied thus:

- concrete sub-floor, the strip should be attached to the exposed area of the panel using double-sided tape
- timber sub-floor, the strip without double-sided tape is attached to the sub-floor using staples positioned as close to the internal angle as possible.

9.2 The panels are laid from the corner furthest from the point of access. The Flanking Support Strip is folded to ensure it is positioned between the perimeter structure and the panel (see Figure 3).

*Figure 3 Flanking/Support Strip installation*




9.3 The panels, in adjacent rows, should be staggered by a minimum of 400 mm. Provided offcuts are not less than 200 mm, they can be used to start another row.

9.4 Allow for possible expansion of the boards by allowing a gap between the free edge of the board and the perimeter wall or other abutment. This gap should be calculated as 1 mm per linear metre of flooring and in no circumstances should be less than 10 mm. If required small wedges can be placed between the Flanking Support Strip and the structure. They must be removed before skirtings are fixed.

9.5 Profloor Adhesive is applied to the tongue-and-groove joints of the boards before butting them together.

9.6 When the products are to be used as underlay for smooth floor finish, only fully flexible material, class A, to BS 3261 : Part 1 : 1973(1991) should be used. Plywood or hardboard of 6 mm thickness can be fixed over the top, using impact adhesive only, where a higher quality finish is specified or as a base for non-flexible floor finishes.

9.7 Where there is a likelihood of regular water spillage, eg in rooms such as kitchens, bathrooms, shower and utility rooms, protection should be considered, eg by the use of flexible vinyl sheet flooring with welded joints and cove skirtings.

## Technical Investigations

The following is a summary of the technical investigations carried out on Profloor Micro Deck and Profloor Refurb Deck (Standard and Hi-load grades).

### 10 Tests

10.1 An evaluation was made of tests for impact sound carried out in accordance with BS 2750 : Parts 6 and 7 : 1980(1993) and for airborne sound carried out in accordance with BS 2750 : Part 3 : 1980 and BS 2750 : Part 4 : 1980(1993).

The results were rated in accordance with BS 5821 : Parts 1 and 2 : 1984.

10.2 Tests were carried out on both Standard and Hi-Load grades of boards to establish:

resistance to long- and short-term loading
dimensional accuracy
hygrothermal behaviour
cohesive strength
creep.

### 11 Investigations

11.1 A user survey was conducted to evaluate performance in use.

11.2 An assessment was made of properties in relation to fire.

11.3 An assessment was made of data relating to practicability of installation.

## Bibliography


BS 1142 : 1989 *Specification for fibre building boards*

BS 2750 *Measurements of sound insulation in buildings and of building elements*
Part 3 : 1980 *Laboratory measurements of airborne sound insulation of building elements*
Part 4 : 1980(1993) *Field measurements of airborne sound insulation between rooms*
Part 6 : 1980(1993) *Laboratory measurements of impact sound insulation of floors*
Part 7 : 1980(1993) *Field measurements of impact sound insulation of floors*

BS 3261 *Specification for unbacked flexible PVC flooring*
Part 1 : 1973(1991) *Homogeneous flooring*

BS 5669 *Particleboard*
Part 2 : 1989 *Specification for wood chipboard*

BS 5821 *Methods for rating the sound insulation in buildings and of building elements*
Part 1 : 1984 *Method for rating the airborne sound insulation in buildings and of interior building elements*
Part 2 : 1984 *Method for rating the impact sound insulation*

BS 6399 *Loading for buildings*
Part 1 : 1996 *Code of practice for dead and imposed loads*

BS 8203 : 1996 *Code of practice for installation of resilient floor coverings*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