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BBA BRITISH BOARD OF AGRÉMENT
ASSESSMENT OF PRODUCTS FOR CONSTRUCTION

Designated by Government to issue European Technical Approvals

Wedi Systems (UK) Ltd
Suite 23
Generation Centre
Dane Street
Rochdale OL12 6XB
Tel: 01706 647333 Fax: 01706 759819

Agrément Certificate No 00/3675

WEDI TILEBACKER BOARD

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

Product

- *THIS CERTIFICATE RELATES TO WEDI TILEBACKER BOARD, A RIGID EXTRUDED POLYSTYRENE FOAM BOARD FINISHED ON BOTH SIDES WITH SYNTHETIC MORTAR FACINGS REINFORCED WITH GLASS-FIBRE MESH FABRIC.*
- *The product is for use as an intermediate substrate to ceramic and natural stone tiling for internal use.*
- *It is essential that the product is used in accordance with the conditions set out in the* Design Data *and* Installation *parts of this Certificate.*

Regulations

1 The Building Regulations 1991 (as amended) (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 Tiling Board with the Building Regulations. In the opinion of the BBA, Wedi Tilebacker Board, if used in accordance with the provisions of this Certificate, will meet the relevant requirements listed below.

Requirement:	B2	Internal fire spread (linings)
Comment:		The product meets the Requirement in every purpose group. See sections 10.1 to 10.3 of this Certificate.
Requirement:	Regulation 7	Materials and workmanship
Comment:		The product is acceptable. See section 14 of this Certificate.

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

In the opinion of the BBA, Wedi Tilebacker Board, 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. See section 14 of this Certificate.

continued

continued

Regulation:	13	Means of escape from fire facilities for fire-fighting and means of warning of fire in dwellings
Standard:	E6.1	Internal fire spread — General
Comment:		The product meets this Standard. See sections 10.1 to 10.3 of this Certificate.

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

In the opinion of the BBA, Wedi Tilebacker Board, if used in accordance with the provisions of this Certificate, can satisfy the various Building Regulations as listed below.

Regulation:	B2	Fitness of materials and workmanship
Comment:		The product is acceptable. See section 14 of this Certificate.
Regulation:	E4	Internal fire spread — Linings
Comment:		The product meets this Regulation. See sections 10.1 to 10.3 of this Certificate.

4 Construction (Design and Management) Regulations 1994

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

See section: 6 *Delivery and site handling.*

Technical Specification

5 Description

5.1 Wedi Tilebacker Board consists of extruded polystyrene panels, finished on both sides with synthetic mortar facings reinforced with glass-fibre mesh fabric.

5.2 The product is available in the sizes and weights given in Table 1.

Table 1 Nominal dimensions and weights

Length (mm) x width (mm) x thickness (mm)	Approximate weight per board (kg)
1250 x 600 x 6	1.9
2500 x 600 x 10	3.7
2500 x 625 x 12.5	3.8
2500 x 600 x 20	4.7
2500 x 600 x 30	5.2
2500 x 600 x 40	5.8
2500 x 600 x 50	6.2

5.3 Materials are supplied to an agreed specification. The finished product is examined for dimensional accuracy, adhesion of the facings, and visually.

5.4 The fixing components comprise:

Wedisteck RK — used as a fixing anchor to walls and floors

Wedisteck WE — for special shapes, bath surrounds, shelves and all kinds of substructure

Wedisteck BA — to connect and join adjacent Tilebacker Boards of minimum thickness 30 mm

Wedi reinforcing tape — for joints in dry areas

Wedi sealing tape — for sealing and reinforcement of boards and corner joints in wet areas

Wedi dowel fixing — used to fix the board to surfaces unable to bond with adhesive or to supplement adhesive fixing.

5.5 The Certificate holder should be consulted for details of the additional screw washers available and for suitable tile adhesives [to BS 5980 : 1980(1997)] and tile grouts.

6 Delivery and site handling

6.1 The product is delivered on pallets and can be off-loaded either by mechanical handling equipment or manually by removing individual boards. Each stack incorporates a label bearing the manufacturer's name, type, size of sheet and the BBA identification mark incorporating the number of this Certificate.

6.2 The boards should be stored flat, under cover, on a dry, level surface away from sources of ignition. Stacks of loose boards should not exceed 1 m in height.

6.3 The Certificate holder's advice should be sought with regard to storage of the accessories.

Design Data

7 General

7.1 Wedi Tilebacker Board is satisfactory for use as an intermediate substrate to ceramic and natural stone tiling for internal use, meets the requirements for loading in BS 5980 : 1980(1997) and can be installed by competent contractors.

7.2 It is suitable as part of a system of tiles, cement-based tile adhesive and grout, to install a stable, waterproof tile substrate in showers and wet areas.

7.3 The board may also be used to produce various kinds of substructure, such as bath surrounds, partitions and shelves. Wedi Systems (UK) Ltd should be consulted for advice on the suitability of any proposed project.

7.4 The board may be directly bonded to clean, sound brick, block or concrete walls and may also be

used on concrete floors or suspended timber floors. Boards can also be fixed to stud walling/partitions.

7.5 Masonry walls of new buildings should be designed and constructed in accordance with BS 5628 : Part 3 : 1985, and the walls of existing buildings should be watertight.

7.6 In timber batten systems, services can be incorporated in the void behind the board (provided the void is at least 20 mm wide), making chasing of the wall unnecessary (see section 17). When using adhesive systems, or where the services have a greater depth than the void, the wall should be chased rather than the board. It is recommended that services penetrating the board, eg light switches, power outlets, are kept to a minimum.

7.7 The installation of the Wedi Tilebacker Board System requires careful detailing around doors and windows to achieve a satisfactory finish. New work should be designed to accommodate the thickness of the Wedi Tilebacker Board System.

7.8 If present, mould or fungal growth should be treated prior to the application of the product.

7.9 When using adhesive fixing methods, it is essential to establish, before installation, that a satisfactory bond can be achieved between the walling material and the adhesive. If difficulty is experienced with adhesion, the Certificate holder's advice should be sought.

8 Thermal insulation

The board will provide thermal insulation and, for calculation purposes, the thermal conductivity (λ value) of the foam component should be taken as 0.033 $Wm^{-1}K^{-1}$.

9 Condensation characteristics

9.1 The board can offer significant resistance to water vapour transmission provided all the joints are taped and the tiling is bonded and grouted in accordance with the Certificate holder's literature.

9.2 When carrying out condensation risk assessments the water vapour resistivity of the foam component may be taken as 460 $MNsg^{-1}m^{-1}$.

10 Performance in fire

10.1 The board does not change the fire resistance of the wall on which it is installed.

10.2 When tested to BS 476 : Part 7 : 1987 (Surface Spread of Flame), the untiled product achieved a Class 1 rating.

10.3 Recessed lighting must not be used with this form of insulation material.

11 Proximity of flues and appliances

When installing the board in close proximity to certain flue pipes and/or heat-producing appliances the following provisions to the national Building Regulations are acceptable:

England and Wales

Approved Document J

Scotland

Technical Standards, Part F *Provisions deemed to satisfy the standards*

Northern Ireland

Technical Booklet L.

12 Impact resistance

When tested in accordance with BBA test methods, tiled board performed in a satisfactory manner. Under soft body impacts damage was not caused and under hard body impacts no greater damage than would be expected from tiled concrete panels occurred.

13 Wall-mounted fittings

The recommendations of the manufacturer should be followed. Objects other than lightweight items, should be fixed through the board into the wall behind, using proprietary fixings.

14 Durability

The durability of the materials is satisfactory. Provided the board is used in accordance with this Certificate and the manufacturer's instructions, and is fixed to satisfactory, stable and durable backgrounds, 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 are easily carried out.

Installation

15 General

15.1 The Wedi Tilebacker Board is for installation on internal walls and floors of new or existing buildings. The fixing method depends on the substrate.

15.2 Cutting of the board may be carried out by using such tools as a padsaw, keyhole saw or craft knife.

15.3 Installation should be in accordance with the manufacturer's literature and the provisions detailed in this Certificate. It is recommended that installation be undertaken by experienced tile fitters or other suitably trained personnel.

16 Procedure — walls — direct bonding

(see Figure 1)

16.1 Direct bonding is for use with clean and sound brick, block or concrete walls.

Adhesive strips or mortar dabs — uneven wall surfaces [(A) in Figure 1]

16.2 The board (minimum thickness 10 mm) is cut to length. The adhesive is applied to the wall surface to provide perimeter strips or dabs. Whilst the adhesive is still fresh and moist, the board is placed in position and, using a timber batten, thoroughly tamped to ensure good all round contact and a true surface.

16.3 The adhesive should be allowed to set and harden before the jointing tape (reinforcing or sealing) is applied in a fresh layer of adhesive with a taping knife, or similar, so that it is firmly bedded and free from trapped air bubbles. Immediately after the tape has been fixed, a fresh layer of adhesive is applied over it and feathered off with the surface of the board. When this adhesive has set, but not necessarily dried, the tiles can be applied using the appropriate adhesive.

Thin-bed adhesive — flat wall surface [(B) in Figure 1]

16.4 The adhesive is applied either to the existing sound wall surface or directly to the board (minimum thickness 6 mm) and combed out with an 8 mm by 8 mm toothed and notched trowel over the complete board area to provide a ribbed adhesive bed. The board is offered up to the wall surface and tapped true. The boards are butt-jointed and all joints are reinforced with the appropriate jointing tape applied as described in section 16.3.

Dowel fixing only

16.5 Where the wall is flat, but either surface preparation cannot be provided and contamination will prevent adhesion or where the surface is insufficiently sound but the wall structure beneath is solid, the board can be fixed using Wedi dowel fixings.

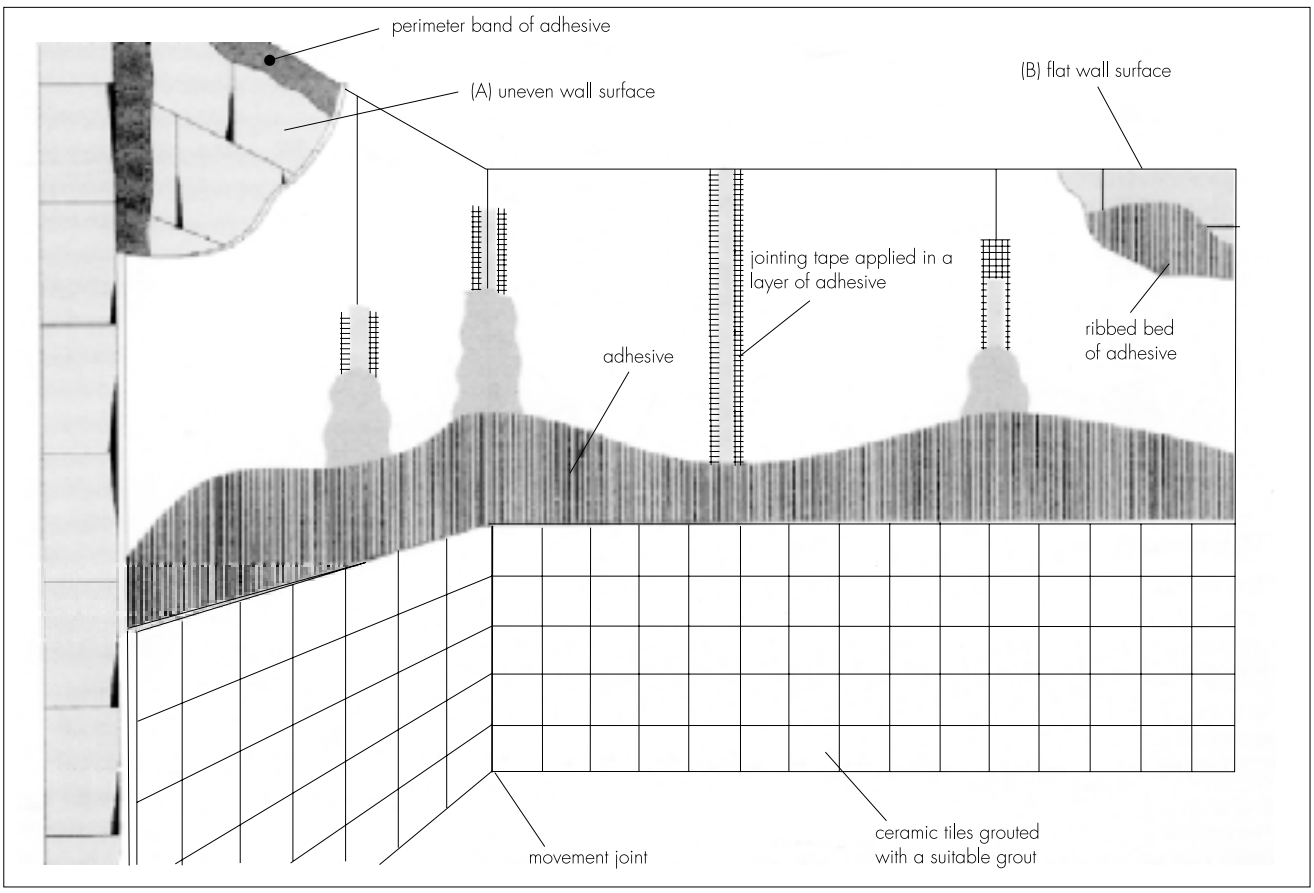
16.6 For ceramic tiling, the dowel fixings should be used at a rate of five per square metre and eight per square metre for natural stone application up to 40 kgm^{-2} (tiles fixed by adhesive only). Tiling above this weight per unit area (up to 60 kgm^{-2}), may be fixed in accordance with BS 8298 : 1994. The joints between the boards should be sealed with the appropriate jointing tape applied as described in section 16.3. For natural stone tile application, dowel fixing should be used to supplement adhesive fixing procedure (see section 16.5).

Tile fixing

16.7 Tiles should be bedded onto the boards once the adhesive securing the boards to the wall has adequately set and hardened. The tiles should be fixed using a tile adhesive conforming to BS 5980 : 1980(1997). In wet areas the tiles should be fixed using the thin solid-bed fixing technique to prevent voids.

16.8 Once the tile bed has hardened sufficiently, the joints between the tiles can be grouted using an appropriate cement-based grout. Movement joints in the tile bed, eg between adjacent walls, should be sealed with a suitable sealant.

Figure 1 Installation — direct bonding



17 Procedure — stud walling/partitions (see Figure 2)

17.1 This system uses timber or metal studding designed to provide rigid support for the board. The unsupported span of the framework depends on the thickness of the board to be affixed (see Table 2). All board edges must be supported.

Table 2 Framework — unsupported span

Max board thickness (mm)	Max unsupported span (mm)
10	300[1]
12.5	400
20	600[2]

(1) Illustrated as (A) in Figure 2.
(2) Illustrated as (B) in Figure 2.

Board fixing

17.2 The board is fixed to the framework using a proprietary washer and screw fixing. These are fixed at the rate of five per square metre at two per batten (600 mm centres) for ceramic tiles and eight per square metre for natural stone tiles. The fixings must be a minimum of 30 mm from the edge of the board. The screw/washer fixing is tightened up to the board's surface and the washer driven flush to the board surface using a rubber-headed mallet. The screw is then re-tightened.

17.3 All joints are taped (reinforcing or sealing) following the procedure given in section 16.3.

Tile fixing

17.4 Tiles are applied and grouted as described in sections 16.7 and 6.8.

18 Procedure — concrete floors (see Figure 3)

18.1 Existing concrete bases and screeds should be mechanically prepared in accordance with BS 8204 : Part 1 : 1999 to ensure removal of all traces of existing finishes and contamination, to expose a clean surface. New concrete or screed bases should be cured in accordance with BS 8204 : Part 1 : 1999 to allow shrinkage to occur prior to fixing of the boards.

Figure 2 Installation — stud walls and partitions

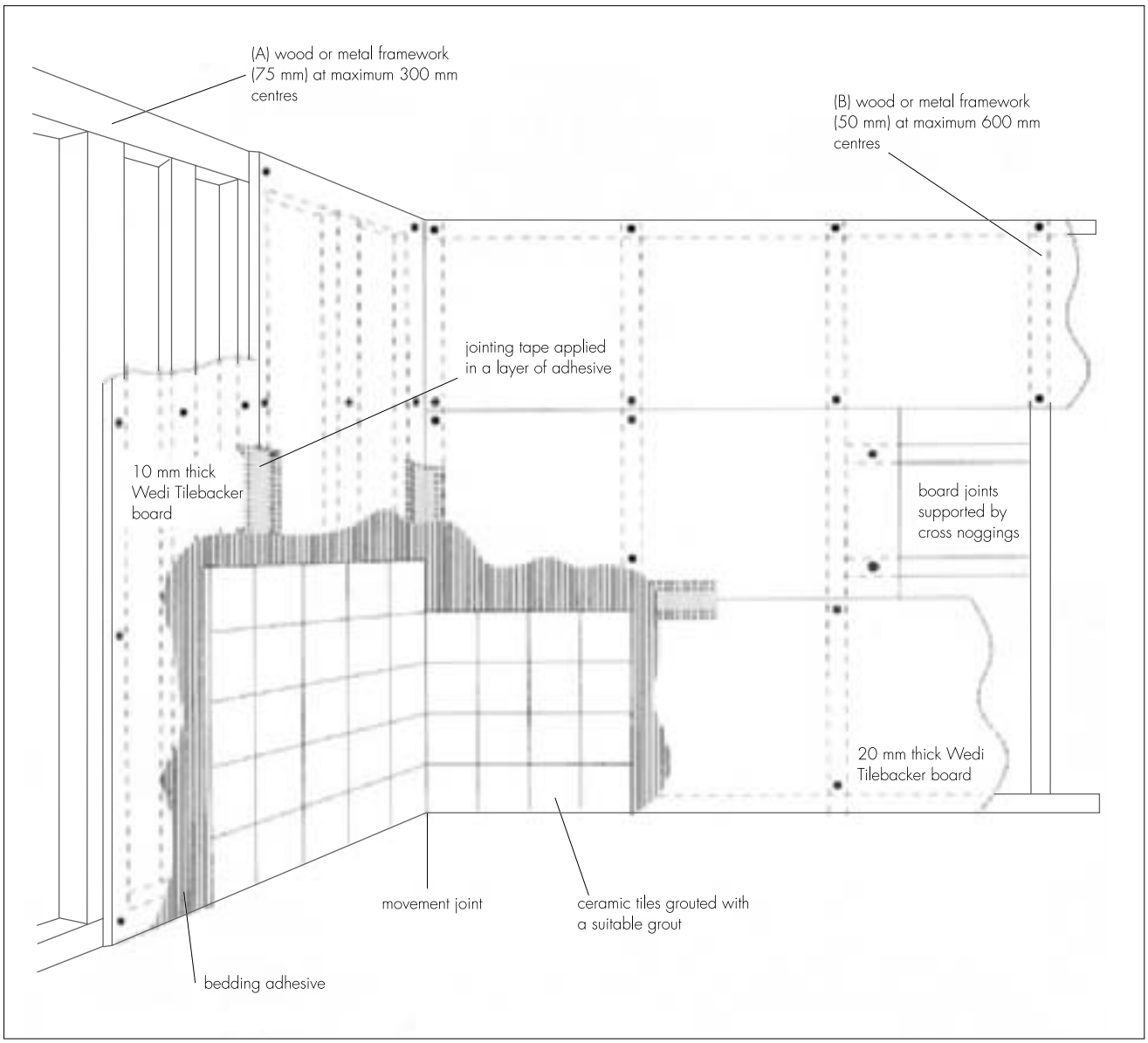
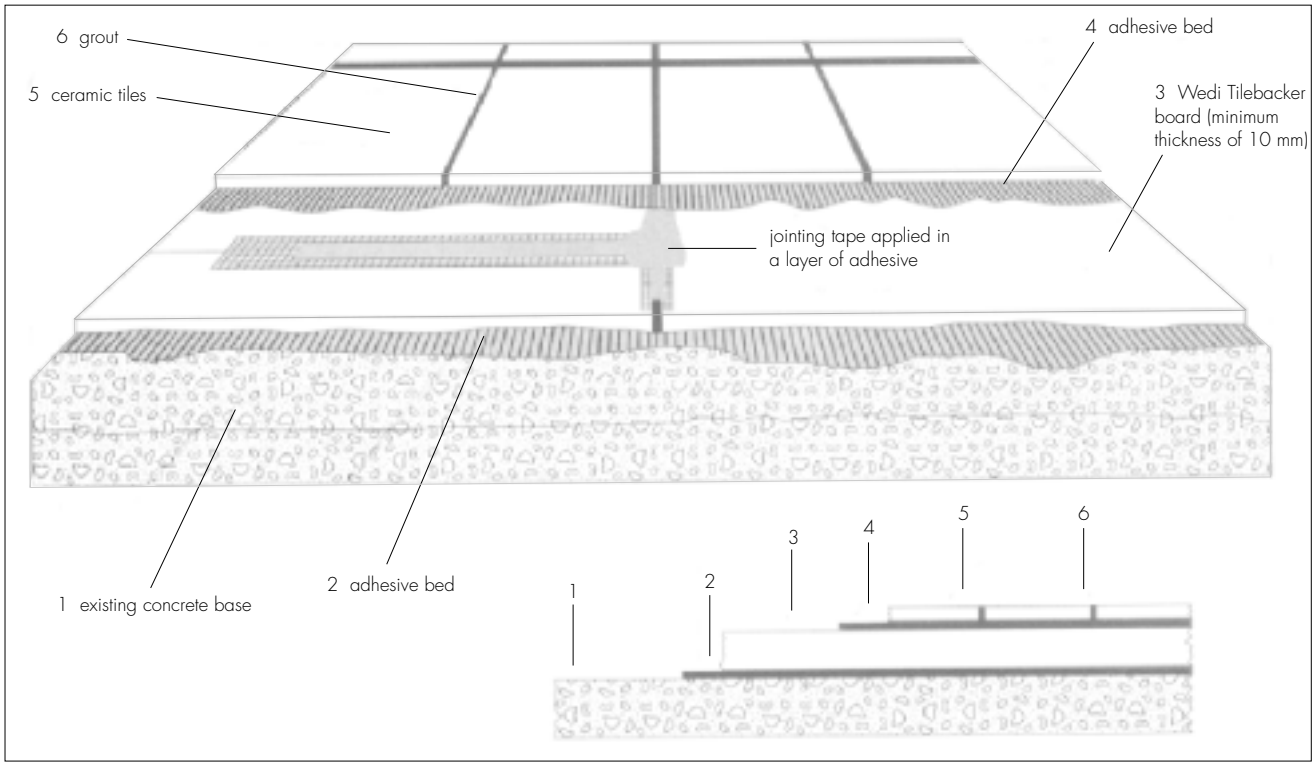


Figure 3 Installation — concrete floors



18.2 The boards should be bedded onto the prepared base using an appropriate cement-based adhesive mortar. This adhesive mortar should be trowelled out and combed through with the recommended notched trowel to give a ribbed bed — slight depressions of the base are filled at the same time. The boards should be laid with staggered joints on the fresh adhesive and be thoroughly bedded in to ensure that, as far as is practicable, voids are eliminated and the boards are fully supported.

18.3 The adhesive must be allowed to harden before the joints are taped with either reinforcing or sealing tape, applied following the procedure given in section 16.3.

Tile fixing

18.4 Tiles should be applied using a thin solid-bed fixing technique and grouted as described in sections 16.7 and 16.8.

Movement joints

18.5 The board must not bridge movement joints in the sub-floor. The integrity of such joints should be maintained through the board/tile bed and should be sealed in the appropriate manner.

19 Procedure — suspended timber floors

(see Figure 4)

19.1 Suspended timber floors should be constructed in accordance with BS 8201 : 1987 and existing floorboards should be securely and rigidly fixed (reference should be made to BS 5268 : Part 2 : 1991).

Areas up to 20 m²

19.2 The surface of the floorboards should be primed and the coating allowed to dry. Advice on appropriate primers and application should be sought from the Certificate holder.

19.3 Using a flexible cement-based adhesive the boards (minimum thickness of 10 mm) should be bedded on to it following the procedure described in section 18.2. When dry, apply the proprietary washer and screw fixing should be applied at the rate of five per square metre and a minimum of 30 mm from the edge of the board. The screw/washer fixing is tightened into the board until the screw head is flush with the surface. If required, it may be driven flush with the surface using a rubber headed mallet and the screw re-tightened. In wet areas, it is recommended that the fixing hole be primed with silicone sealant prior to inserting the fixing.

Areas over 20 m²

19.4 The procedure follows that described in sections 19.2 and 19.3 but a layer of glass-fibre mesh fabric(1) is placed over the boards and held in place by the tile adhesive bed.

(1) Details are held by the Certificate holder.

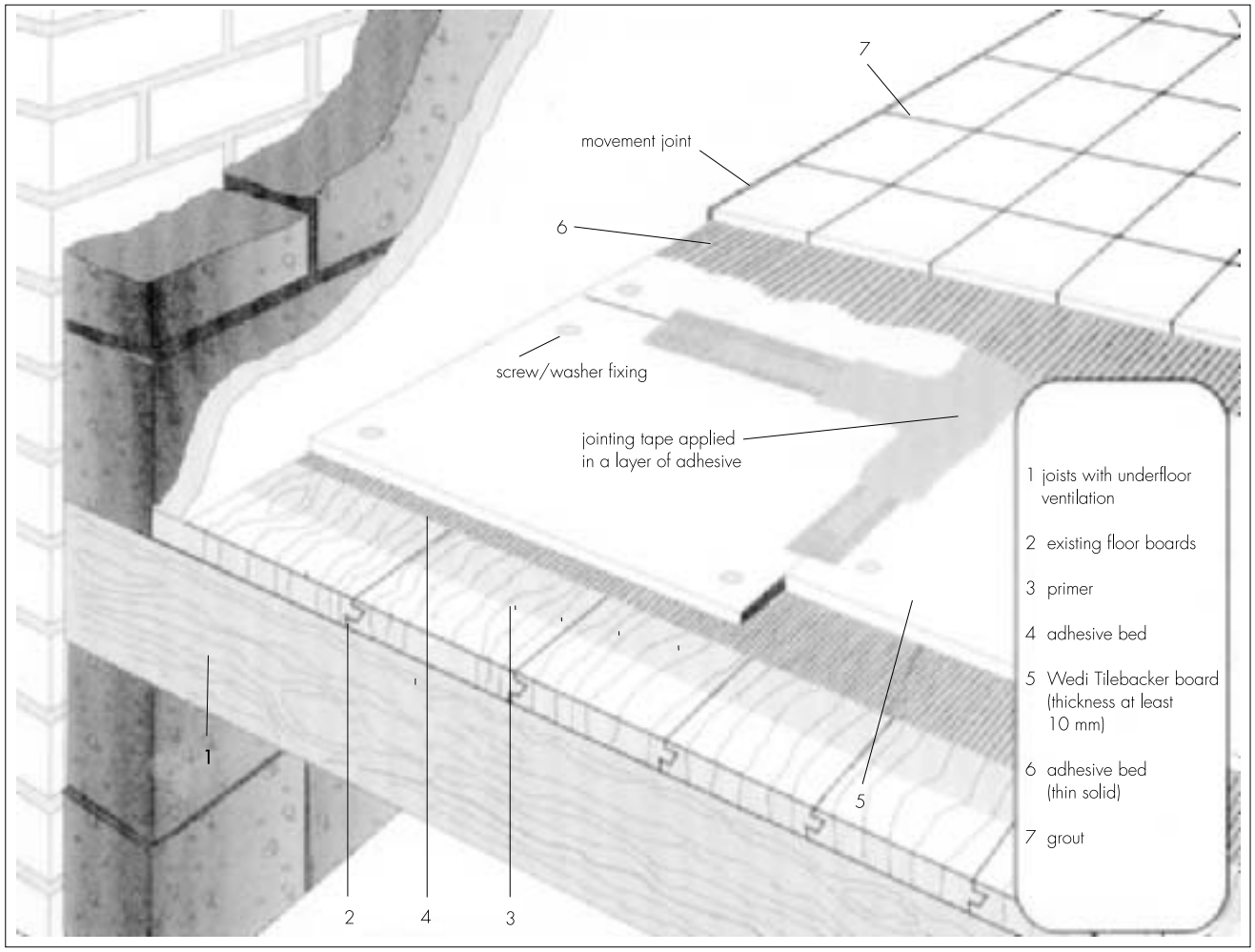
Tile fixing

19.5 Tiles should be fixed using the flexible cement-based adhesive, following the procedure described in sections 16.7 and 16.8.

Movement joints

19.6 The board must not bridge movement joints in the sub-floor. The integrity of such joints should be maintained through the board/tile bed and should be sealed in the appropriate manner.

Figure 4 Installation — suspended timber floors



Technical Investigations

The following is a summary of the technical investigations carried out on Wedi Tilebacker Board.

20 Tests

20.1 Wedi Tilebacker Board was tested for dimensional accuracy.

20.2 Wedi Sealing Tape was tested for tensile strength.

20.3 The Wedi Tilebacker Board System, consisting of boards, tiles, adhesive mortar, grout, reinforcing/sealing tape and connectors, was tested for:

effect of humidity on stability
effect of thermal cycling on stability
impact resistance (soft body)
impact resistance (hard body)
bending strength
bond strength to substrate, tiles and boards under various conditions.

21 Other investigations

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

21.2 Sites in progress were examined to establish the practicability of installation.

21.3 A user survey of treated properties was carried out to establish the performance in use.

21.4 An examination was made of test reports relating to:

surface spread of flame to BS 476 : Part 7 : 1987
water vapour resistivity
compressive strength
tensile strength
thermal conductivity.

Additional Information

The quality management systems of Wedi GmbH have been assessed and registered as meeting the requirements of EN ISO 9001 : 1994 by TüV — Zertifizierungsgemeinschaft e.V. (Certificate Registration No 041006221).

Bibliography

BS 476 *Fire tests on building materials and structures* Part 7 : 1985 *Surface spread of flame*

BS 5628 *Code or practice for use of masonry* Part 3 :1985 *Materials and components, design and workmanship*

BS 5980 : 1980(1997) *Specification for adhesives for use with ceramic tiles and mosaics*

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

BS 8204 *Screeds, bases and in-situ floorings* Part 1 : 1999 *Code of practice for concrete bases and screeds to receive in-situ floorings*

BS 8298 : 1994 *Code of practice for the design and installation of natural stone cladding and lining*

EN ISO 9001 : 1994 *Quality system. Model for quality assurance in design, development, production, installation and servicing*

Conditions of Certification

22 Conditions

22.1 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.

22.2 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.

22.3 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.

22.4 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.

22.5 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
ASSESSMENT OF PRODUCTS FOR CONSTRUCTION

In the opinion of the British Board of Agrément, Wedi Tilebacker Board is fit for its intended use provided it is installed, used and maintained as set out in this Certificate. Certificate No 00/3675 is accordingly awarded to Wedi Systems (UK) Ltd.

On behalf of the British Board of Agrément

Date of issue: 24th January 2000

Chief Executive

British Board of Agrément
P O Box No 195, Bucknalls Lane
Garston, Watford, Herts WD2 7NG
Fax: 01923 665301

e-mail: mail@bba.star.co.uk
http://www.bbacerts.co.uk