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BBA APPROVAL INSPECTION TESTING CERTIFICATION
TECHNICAL APPROVALS FOR CONSTRUCTION

Agrément Certificate
01/3857
Product Sheet 1

NORBORD BOARDING

STERLING OSB/3

PRODUCT SCOPE AND SUMMARY OF CERTIFICATE

This Certificate relates to Sterling OSB/3, a loadbearing oriented strand board for use as flooring, roof decking and sarking, and sheathing on timber-frame buildings.

AGRÉMENT 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

Resistance to moisture — providing adequate precautions are taken, the product, when incorporated into a construction, should perform satisfactorily (see section 5).

Behaviour in relation to fire — the product may be regarded as having a Class 3 surface spread of flame rating (see section 6). Resistance to fire is determined by the particular application in which the product is used (see sections 13, 16 and 19).

Thermal insulation — the product will have negligible effect on the thermal transmittance (U value) of the construction in which it is incorporated (see section 7).

Physiological properties — the product will not emit gases at levels in excess of those detrimental to habitability (see section 8).

Durability — providing it is not subjected to prolonged high humidity or wetting, the product will not suffer significant degradation (see section 10).

Structural performance — the product, when incorporated into a structure, can sustain the design loads (see sections 12, 15 and 18).

The BBA has awarded this Agrément Certificate to the company named above for the product 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: 30 September 2010

Originally certificated on 3 October 1988 for flooring and on 27 March 1992 for roofing and sheathing.

Brian Chamberlain
Head of Approvals — Engineering

Greg Cooper
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, Sterling OSB/3, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements of the following Building Regulations:

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

Requirement:	Regulation 7	Materials and workmanship
Comment:		The product is acceptable. See section 10 and the *Installation* part of this Certificate.
Flooring		
Requirement:	A1	Loading
Comment:		The product has sufficient strength and stiffness to sustain and transmit design loads to the primary structure without excessive deflection. See sections 11.1 and 12 of this Certificate.
Requirement:	B3(1)(3)(4)	Internal fire spread (structure)
Comment:		The product has a Class 3 surface spread of flame rating and can contribute to meeting regulatory requirements. The construction detailed in section 13.1 of this Certificate has a calculated fire resistance rating of 30 minutes loadbearing capacity, 15 minutes integrity and 15 minutes insulation. See section 6 of this Certificate.
Roofing		
Requirement:	A1	Loading
Comment:		The product has sufficient strength and stiffness to sustain and transmit design loads to the primary structure without excessive deflection. See sections 15 and 17.1 of this Certificate.
Requirement:	B3(3)(4)	Internal fire spread (structure)
Comment:		The product has a Class 3 surface spread of flame rating and can contribute to meeting regulatory requirements. See section 6 of this Certificate.
Requirement:	B4(2)	External fire spread
Comment:		The designation of the roof with respect to external fire spread will depend on the roof covering used. See section 16 of this Certificate.
Requirement:	C2(c)	Resistance to moisture
Comment:		The product can contribute to a roof structure suitably designed to prevent excessive condensation. See section 14.1 of this Certificate.
Sheathing		
Requirement:	A1	Loading
Comment:		The product has sufficient strength and stiffness to sustain and transmit design loads to the primary structure without excessive deflection. See sections 17.1, 18.1 and 18.2 of this Certificate.
Requirement:	B3(1)(2)(3)(4)	Internal fire spread (structure)
Comment:		The product has a Class 3 surface spread of flame rating and can contribute to meeting regulatory requirements. See sections 6 and 19 of this Certificate.

The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)(2)	Fitness and durability of materials and workmanship
Comment:		The use of the product satisfies the requirements of this Regulation. See sections 9 and 10 and the *Installation* part of this Certificate.
Regulation:	9	Building standards — construction
Flooring		
Standard:	1.1(a)(b)	Structure
Comment:		The product has sufficient strength and stiffness to sustain and transmit design loads to the primary structure without excessive deflection, in accordance with clause 1.1.1[1] of this Standard. See sections 11.1 and 12 of this Certificate.
Standard:	2.1	Compartmentation
Standard:	2.2	Separation
Standard:	2.3	Structural protection
Standard:	2.9	Escape
Comment:		The product can contribute to meeting regulatory requirements. The construction detailed in section 13.1 of this Certificate has a calculated fire resistance rating of 30 minutes loadbearing capacity, 15 minutes integrity and 15 minutes insulation, in accordance with clauses 2.1.12[2], 2.2.1[2], 2.2.3[1], 2.2.4[2], 2.2.7[1], 2.3.2[1][2], and 2.9.29[2]. See sections 6 and 13.1 of this Certificate.
Standard:	2.4	Cavities
Comment:		Cavity barriers must be provided in accordance with the product's Class 3 surface spread of flame rating, with reference to clauses 2.4.1[1][2], 2.4.2[1] and 2.4.4[1]. See sections 6 and 19 of this Certificate.
		(1) Technical Handbook (Domestic).
		(2) Technical Handbook (Non-Domestic).
Roofing		
Standard:	1.1(a)(b)	Structure
Comment:		The product has sufficient strength and stiffness to sustain and transmit design loads to the primary structure without excessive deflection, in accordance with clause 1.1.1[1]. See section 15 of this Certificate.

Standard:	2.1	Compartmentation
Standard:	2.2	Separation
Standard:	2.3	Structural protection
Standard:	2.9	Escape
Comment:		The product can contribute to meeting regulatory requirements, with reference to clauses 2.1.12[1][2], 2.2.1[2], 2.2.3[1], 2.2.4[2], 2.2.7[1], 2.3.2[1][2] and 2.9.29[2]. See sections 6 and 16 of this Certificate.
Standard:	2.4	Cavities
Comment:		Cavity barriers must be provided in accordance with the product's Class 3 surface spread of flame rating, in accordance with Annex 2C, clause 2.C.1, and clauses 2.4.1[1][2], 2.4.2[1] and 2.4.4[1]. See section 6 of this Certificate.
Standard:	3.15	Condensation
Comment:		A vapour control layer must be provided on the room side of the construction to prevent damage arising from the passage of moisture vapour from the interior of the building, in accordance with clauses 3.15.1[1], 3.15.2[1], 3.15.4[1] and 3.15.5[1]. See section 14.1 of this Certificate.

(1) Technical Handbook (Domestic).
(2) Technical Handbook (Non-Domestic).

Sheathing

Standard:	1.1(a)(b)	Structure
Comment:		The product has sufficient strength and stiffness to sustain and transmit design loads to the primary structure without excessive deflection, in accordance with clause 1.1.1[1]. See sections 18.1 and 18.2 of this Certificate.
Standard:	2.1	Compartmentation
Standard:	2.2	Separation
Standard:	2.3	Structural protection
Standard:	2.9	Escape
Comment:		The product can contribute to meeting regulatory requirements, with reference to clauses 2.1.12[1][2], 2.2.1[2], 2.2.3[1], 2.2.4[2]), 2.2.7[1], 2.3.2[1][2] and 2.9.29[2]. See sections 6 and 19 of this Certificate.
Standard:	2.4	Cavities
Comment:		Cavity barriers must be provided in accordance with the product's Class 3 surface spread of flame rating, in accordance with Annex 2C, clause 2.C.1, and clauses 2.4.1[1][2], 2.4.2 [1] and 2.4.4[1]. See section 6 of this Certificate.
Standard:	3.15	Condensation
Comment:		A vapour control layer must be provided on the room side of the construction to prevent damage arising from the passage of moisture vapour from the interior of the building, in accordance with clauses 3.15.1[1], 3.15.2[1], 3.15.4[1] and 3.15.5[1]. See section 14.1 of this Certificate.

(1) Technical Handbook (Domestic).
(2) Technical Handbook (Non-Domestic).

The Building Regulations (Northern Ireland) 2000 (as amended)

Regulation:	B2	Fitness of materials and workmanship
Comment:		The product is acceptable. See section 10 and the *Installation* part of this Certificate.

Flooring

Regulation:	D1	Stability
Comment:		The product has sufficient strength and stiffness to sustain and transmit design loads to the primary structure without excessive deflection. See sections 11.1 and 12 of this Certificate.
Regulation:	E4(3)(4)	Internal fire spread — Structure
Comment:		The product has a Class 3 surface spread of flame rating and can contribute to meeting regulatory requirements. The construction detailed in section 13.1 of this Certificate has a calculated fire resistance rating of 30 minutes loadbearing capacity, 15 minutes integrity, and 15 minutes insulation. See section 6 of this Certificate.

Roofing

Regulation:	C5	Condensation
Comment:		The boards can be incorporated into a roof structure suitably designed to prevent harmful effects from interstitial condensation. See section 14.1 of this Certificate.
Regulation:	D1	Stability
Comment:		The product has sufficient strength and stiffness to sustain and transmit design loads to the primary structure without excessive deflection. See section 15 of this Certificate.
Regulation:	E4(3)(4)	Internal fire spread — Structure
Comment:		The product has a Class 3 surface spread of flame rating and can contribute to meeting regulatory requirements. See section 6 of this Certificate.
Regulation:	E5(b)	External fire spread
Comment:		The designation of the roof with respect to external fire spread will depend on the roof covering used. See section 16 of this Certificate.

Sheathing

Regulation:	C5	Condensation
Comment:		A vapour control layer must be provided on the room side of the construction to prevent damage arising from the passage of moisture vapour from the interior of the building. See section 17.1 of this Certificate.
Regulation:	D1	Stability
Comment:		The product has sufficient strength and stiffness to sustain and transmit design loads to the primary structure without excessive deflection. See sections 18.1 and 18.2 of this Certificate.

Regulation:	E4(1)(2)(3)(4)	Internal fire spread — Structure
Comment:		The product, which has a Class 3 surface spread of flame rating, may be incorporated into a construction meeting regulatory requirements. See sections 6 and 19 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 sections: 2 *Delivery and site handling* (2.4) and 4 *Practicability of installation* (4.2 and 4.3) of this Certificate.

Non-regulatory Information

NHBC Standards 2010

NHBC accepts the use of Sterling OSB/3, when installed and used in accordance with this Certificate, in relation to *NHBC Standards*, Chapters 5.2 *Suspended ground floors*, 6.2 *Superstructure : External timber-framed walls*, 7.1 *Roofs : Flat roofs and balconies*, 7.2 *Pitched roofs*, and 8.3 *Floor finishes*.

General

This Certificate relates to Sterling OSB/3, a loadbearing oriented strand board for use as flooring, roof decking and sarking, and sheathing on timber-frame dwellings. It is suitable for use in humid conditions.

The board must be installed in accordance with the manufacturer's instructions and the requirements of this Certificate.

Technical Specification

1 Description

1.1 Sterling OSB/3 board comprises softwood flakes/strands bonded together with phenolic resins, MDI (methylene diphenyl diisocyanate) binder and waxes. The board is manufactured to the specification detailed in BS EN 300 : 2006 for OSB/3 loadbearing oriented strand boards used in humid conditions.

1.2 The board is produced in standard thicknesses of 9 mm, 11 mm, 13 mm, 15 mm, 18 mm and 23 mm and panel sizes of 2400 mm by 1200 mm, 2440 mm by 1220 mm and 2500 mm by 1250 mm. Other thicknesses, in the range of 9 mm to 23 mm, and panel sizes are available to order.

1.3 The nominal density of the board is 620 $kg \cdot m^{-3}$.

1.4 The board is available with square or tongue-and-groove edges, and is either sanded or unsanded.

1.5 In the manufacturing process, logs, to the Certificate holder's specification, are debarked and cut to length before passing through a waferiser machine. After drying and screening to remove fines, the strands/flakes are blended with resin, binder and wax and formed into a three-ply mat. In the outer two layers the strands/flakes (and woodgrain) are bound with resin and oriented in the direction of the major axis; in the core layer, the strands are bound with a binder and oriented in the direction of the minor axis. The board is formed by curing the mat under pressure and temperature and cutting to size.

1.6 Quality control includes checks on raw materials and on the finished product, in accordance with the requirements of BS EN 300 : 2006, for:

- appearance
- dimensions
- moisture resistance and content (minimum 5%)
- swelling
- strength and elasticity.

1.7 Each board bears the product name, the date and time of manufacture, arrows indicating the major axis and the BBA identification mark incorporating the number of this Certificate.

2 Delivery and site handling

2.1 Handling, storage and delivery of the board should be carried out in accordance with the requirements of BS 8103-3 : 2009.

2.3 The board should be stored in a dry environment.

2.4 For delivery, boards are banded together in bundles up to 1.7 tonnes in weight and 900 mm in height. The board is covered in transit to minimise changes in moisture content. Particular care should be taken to protect the edges and corners. Banding should be cut on arrival at site but protective covering should not be removed until the boards are ready for conditioning (see section 5.4).

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Sterling OSB/3.

Design Considerations

All uses

3 General

In accordance with BS EN 300 : 2006, Sterling OSB/3 is suitable for use in environmental conditions covered by biological hazard class 2 for wood and wood-based products, as defined in BS EN 335-3 : 1996. In such environments, the board is covered and fully protected from the elements. As a general rule, it is recommended that the moisture content of the product should not exceed 16% for any significant period nor 20% at any time. Prolonged exposure to an air temperature of 20°C and a relative humidity of 90% may result in the recommended moisture content being exceeded.

4 Practicability of installation

4.1 The product is designed to be installed by a competent general builder, or a contractor, experienced with this type of product.

4.2 The board is easily cut and fixed using conventional woodworking tools. Normal precautions should be taken to avoid inhalation of wood dust when cutting, drilling and sanding the boards.

4.3 The product can withstand normal site handling and fixing. Damaged boards should not be used. Normal safety precautions should be observed when handling large panels.

5 Resistance to moisture

5.1 In common with all timber products, OSB is subject to moisture movement. As a guide, an increase in moisture content of 1% increases the length and width of a board by 0.3 mm per metre run.

5.2 Under similar environmental conditions, OSB will take longer to equilibrate and will attain an equilibrium moisture content approximately 2% to 3% lower than solid timber.

5.3 To avoid distortion and damage to finishes, movement gaps, in accordance with the recommendations of BS 8103-3 : 2009, should be provided when installing the board.

5.4 To minimise subsequent movement, before installation the board should be conditioned as close as is practicable to the environmental conditions likely to occur in service. To achieve this, the maximum moisture content of the board at the time of installation or fixing, as determined using a properly-calibrated moisture meter, should be as given in BS 8103-3 : 2009, Annex A, ie:

- flooring 12%
- flat roof decking 12%
- sarking for pitched roofs 12%.

5.5 The water vapour resistance factor (μ) of OSB, as given in BS EN 13986 : 2004, should be either taken as the design value given in BS EN 12524 : 2000 [30 (wet cup), 50 (dry cup)] or determined in accordance with BS EN ISO 12572 : 2001. Such values may be used in any interstitial condensation calculations to BS 5250 : 2002. Experimental values determined in accordance with BS EN ISO 12572 : 2001 (wet cup) for Sterling OSB/3 are given in Table 1.

Table 1 Water resistance factor (μ)

Panel thickness (mm)	Water resistance factor (μ)
9	219
15	147
23	107

6 Behaviour in relation to fire

When tested in accordance with BS 476-7 : 1997, the board achieved a Class 3 surface spread of flame rating.

7 Thermal insulation

The design thermal conductivity (λ value) of OSB, given in BS EN 12524 : 2000, is 0.13 $W \cdot m^{-1} \cdot K^{-1}$ and as such will not have a significant effect on the thermal transmittance (U value) of the constructions into which it is incorporated.

8 Physiological properties

In common with other wood-based panels, which include formaldehyde as a component of the resin, the board may emit small amounts of formaldehyde gas. The extractable formaldehyde content is not greater than 8.0 mg per 100 g when measured in accordance with BS EN 120 : 1992. This complies with the lower, Class E1, formaldehyde specification included in BS EN 300 : 2006. Therefore, when used in accordance with this Certificate, the quantity of formaldehyde gas emitted from the board alone will not raise the overall building level to an extent which will affect habitability.

9 Maintenance

As the product has suitable durability, will normally be confined within the building structure and, in most cases, will be covered with finishes, maintenance is not required.

10 Durability

In common with other wood-based panels, the product is likely to lose strength and rigidity, and be susceptible to fungal attack, when subjected to prolonged high humidity or wetting. When maintained under the conditions detailed in section 3, this type of degradation will not arise. Care should be taken when designing, detailing and constructing buildings to ensure that moisture does not accumulate within the board.

Flooring

11 General

11.1 Sterling OSB/3 is suitable for use as domestic or non-domestic (industrial) flooring as specified for OSB/3 in DD CEN/TS 12872 : 2007 or BS 8103-3 : 2009. The product may be used in solid or suspended floor constructions.

11.2 The board should be completely dry and laid after all wet site operations have been completed. Damp-proof membranes and vapour control layers should be incorporated as necessary in accordance with the requirements of BS 8103-3 : 2009.

11.3 Exposure to the elements should be minimised during installation. If wetted, the boards must be allowed to dry out thoroughly before applying any floor coverings or surface coatings, or subjecting them to the full design load.

11.4 Design and installation of the board should be in accordance with BS EN 1995-1-1 : 2004 and DD CEN/TS 12872 : 2007 or BS 8103-3 : 2009.

11.5 When used in high risk areas, such as kitchens and bathrooms, the board must be protected from wetting, eg by providing a continuous waterproof covering, turned up and sealed at junctions with walls and where services pass through the floor.

11.6 In suspended timber floor applications:

- the boards must have a minimum thickness of 15 mm (in domestic applications) and 18 mm (in non-domestic applications)
- timber support work must be designed and used in accordance with BS EN 1995-1-1 : 2004 and/or the relevant building regulations
- ventilation underneath ground floors must be provided in accordance with BS 5250 : 2002. The ground beneath the floor should be free of topsoil and vegetable matter and be covered to resist moisture and prevent plant growth.

11.7 The board will provide a suitable substrate for loose-laid floor coverings or those bonded with solvent or water-based adhesives. Resilient floor coverings such as cork, linoleum, rubber, or vinyl should be laid in accordance with BS 8203 : 2001.

11.8 Guidance on design and installation is given in *NHBC Standards* (Chapter 5.2 *Suspended ground floors*, Chapter 6.4 *Timber and concrete upper floors* and Chapter 8.3 *Floor finishes*).

12 Structural performance

For non-domestic applications, designers need to ensure that the selected board will meet the concentrated load requirements specified in BS EN 1991-1-1 : 2002. Characteristic values for structural design using Sterling OSB/3 boards may be taken from BS EN 12369-1 : 2001.

13 Behaviour in relation to fire

13.1 Calculations carried out in accordance with BS 5268-4.2 : 1990 show that an intermediate floor construction comprising Sterling OSB/3 board supported on timber joists at least 37 mm wide and with a ceiling of 12.5 mm thick plasterboard fixed in accordance with the requirements given in BS 5268-4.2 : 1990, Table 11, has a fire resistance rating of 30 minutes loadbearing capacity, 15 minutes integrity and 15 minutes insulation.

13.2 The fire resistance of other floor constructions incorporating the board may be calculated with reference to BS EN 1995-1-2 : 2004 or, where necessary, by undertaking an appropriate test at a United Kingdom Accreditation Service (UKAS) laboratory accredited for the test concerned.

Roofing

14 General

14.1 Sterling OSB/3 is suitable for use as decking on pitched roofs or on flat roofs and also be used as a pitched roof lining for tiles or slates (sarking) as defined in DD CEN/TS 12872 : 2007 and BS 8103-3 : 2009.

14.2 Design and installation of the board should be in accordance with BS EN 1995-1-1 : 2004 and DD CEN/TS 12872 : 2007 or BS 8103-3 : 2009. Characteristic values for structural design may be taken from BS EN 12369-1 : 2001. During installation, the board should be protected from the weather and should be completely dry when the weatherproof membrane is applied.

14.3 The permissible thickness of board is dependent upon application and support centres, as defined in BS 8103-3 : 2009.

14.4 Roof timbers on which the board is supported should be designed and used in accordance with BS EN 1995-1-1 : 2004 and/or the relevant building regulations. Roof voids should be ventilated in accordance with BS 5250 : 2002.

14.5 On a flat roof, decking constructed from Sterling OSB/3 provides a suitable substrate for waterproofing specifications of:

- built-up felt roofing to BS 8217 : 2005
- mastic asphalt roofing to BS 8218 : 1998
- other built-up roof waterproofing systems covered by a current Agrément Certificate, when laid in accordance with that Certificate.

14.6 In conventional timber flat roof decking, a vapour control layer must be provided in cold roof designs to prevent damage to the structure due to the passage of moisture (vapour) from the interior of the building.

14.7 Guidance is given in *NHBC Standards* (Chapters 7.1 *Roofs : Flat roofs and balconies* and 7.2 *Pitched roofs*).

15 Structural performance

OSB roof decks should be designed in accordance with BS 6229 : 2003 and BS 8103-3 : 2009 with a minimum of 15 mm for joist spacings up to 450 mm, and 18 mm for spacings up to 600 mm.

16 Behaviour in relation to fire

The external fire rating of any roof incorporating the board will depend on the specification of the roof covering used.

Sheathing

17 General

17.1 The product is suitable for use as structural sheathing in timber-frame buildings. The 9 mm and 11 mm thick boards are marketed for this purpose.

17.2 Fabrication and installation of sheathing panels, including the provision of moisture movement gaps, must be in accordance with DD CEN/TS 12872 : 2007 and BS EN 1995-1-1 : 2004. Exposure to the elements should be minimised during installation.

17.3 In accordance with normal good practice for wood-based sheathing materials used in cold frame construction, external walls in which the boards are incorporated must include an effective vapour control layer on the room side, suitable weather protection on the outside surface, a ventilated cavity and damp-proof courses. The product should be treated as conventional plywood sheathing with regard to detailing at openings, eaves and sole plate, the fixing of wall ties and breather paper, and the effect of openings on racking strength.

17.4 The moisture content of sheathing material is affected by the humidity conditions existing in the cavity of which it forms one face. The cavity should be of conventional construction for timber framed buildings, freely drained and ventilated. The outer masonry leaf should have adequate resistance to wind-driven rain, particularly in regions classified as severe exposure. Raked mortar joints or high-porosity masonry should be avoided, particularly in these latter areas.

17.5 The timber structures in which the board is incorporated must be designed and constructed to comply with BS EN 1995-1-1 : 2004.

18 Structural performance

18.1 The safe racking resistance of a timber-frame wall incorporating OSB sheathing nailed to studding should be calculated in accordance with the guidance given in BS EN 1995-1-1 : 2004, by a chartered structural engineer or similarly experienced and qualified person, based upon the vertical design load on the wall and the nail spacing and nail characteristics used to attach the sheathing.

18.2 As a guide, when calculated in accordance with BS EN 1995-1-1 : 2004, Method B, the racking resistance of a timber-frame wall without vertical loading and with sheathing fixed with nails is given in Table 2.

Table 2 Racking resistance of timber-frame wall[1]

Thickness of sheathing (mm)	Nail[2] spacing (mm)	Racking resistance ($kN \cdot m^{-1}$)
9	100	3.62
9	150	2.77
11	100	3.78
11	150	2.90

(1) Studs: timber grade C16, minimum size 38 mm by 75 mm and spaced at a maximum of 600 mm.

(2) Nails: minimum diameter 3.1 mm, minimum length 50 mm and ultimate tensile strength 700 $N \cdot mm^{-2}$.

19 Behaviour in relation to fire

Where the board is incorporated in a wall construction which is subject to fire resistance requirements, an appropriate assessment or test must be carried out by a United Kingdom Accreditation Service (UKAS) accredited laboratory for the test concerned.

Installation

Installation of Sterling OSB/3 should be in accordance with DD CEN/TS 12872 : 2007 or BS 8103-3 : 2009 and the manufacturer's recommendations.

Technical Investigations

20 Tests

Tests were carried out by independent laboratories on:

- material characteristics in accordance with the requirements of BS EN 300 : 2006 for OSB/3
- surface spread of flame in accordance with BS 476-7 : 1997
- hard body impact resistance in accordance with BS EN 1128 : 1996
- water vapour resistance in accordance with BS EN ISO 12572 : 2001.

21 Investigations

21.1 An assessment was made of the product's durability and behaviour in relation to moisture.

21.2 With regard to racking resistance, Sterling OSB/3 has been assessed as equivalent to OSB (type F2), detailed in BS EN 1995-1-1 : 2004, Table 2.

21.3 The fire resistance of a flooring construction was calculated in accordance with BS 5268-4.2 : 1990.

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 5250 : 2002 *Code of practice for control of condensation in buildings*

BS 5268-4.2 : 1990 *Structural use of timber — Fire resistance of timber structures — Recommendations for calculating fire resistance of timber stud walls and joisted floor constructions*

BS 6229 : 2003 *Flat roofs with continuously supported coverings — Code of practice*

BS 8103-3 : 2009 *Structural design of low-rise buildings — Code of practice for timber floors and roofs for housing*

BS 8203 : 2001 *Code of practice for installation of resilient floor coverings*

BS 8217 : 2005 *Reinforced bitumen membranes for roofing — Code of practice*

BS 8218 : 1998 *Code of practice for mastic asphalt roofing*

BS EN 120 : 1992 *Particle boards — Determination of formaldehyde content — Extraction method called the perforator method*

BS EN 300 : 2006 *Oriented Strand Boards (OSB) — Definitions, classification and specifications*

BS EN 335-3 : 1996 *Durability of wood and wood-based products — Definition of hazard classes of biological attack — Application to wood-based panels*

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

BS EN 1991-1-1 : 2002 *Eurocode 1 : Actions on structures — General actions— Densities, self-weight, imposed loads for buildings*

BS EN 1995-1-1 : 2004 *Eurocode 5 : Design of timber structures — General — Common rules and rules for buildings*

BS EN 1995-1-2 : 2004 *Eurocode 5 : Design of timber structures — General — Structural fire design*

BS EN 12369-1 : 2001 *Wood-based panels — Characteristic values for structural design : OSB, particleboards and fibreboards*

BS EN 12524 : 2000 *Building materials and products — Hygrothermal properties — Tabulated design values*

BS EN 13986 : 2004 *Wood-based panels for use in construction — Characteristics, evaluation of conformity and marking*

BS EN ISO 12572 : 2001 *Hygrothermal performance of building materials and products — Determination of water vapour transmission properties*

DD CEN/TS 12872 : 2007 *Wood based panels — Guidance on the use of load-bearing boards in floors, walls and roofs.*

22 Conditions

22.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is granted only to the company, firm or person named on the front page — no other company, firm or person may hold or claim any entitlement to this Certificate
- 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.

22.2 Publications and documents referred to in this Certificate are those that the BBA deems to be relevant at the date of issue or re-issue of this Certificate and include any: Act of Parliament; Statutory Instrument; Directive; Regulation; British, European or International Standard; Code of Practice; manufacturers' instructions; or any other publication or document similar or related to the aforementioned.

22.3 This Certificate will remain valid for an unlimited period provided that the product/system and the manufacture and/or fabrication including all related and relevant 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.

22.4 In granting this Certificate, the BBA is not responsible for:

- 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
- individual installations of the product/system, including the nature, design, methods and workmanship of or related to the installation
- the actual works in which the product/system is installed, used and maintained, including the nature, design, methods and workmanship of such works.

22.5 Any information relating to the manufacture, supply, installation, use and maintenance 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 and maintained. It does 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; 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. 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 manufacture, supply, installation, use and maintenance of this product/system.

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