

BS 5534:2014+A2:2018



BSI Standards Publication

## Slating and tiling for pitched roofs and vertical cladding — Code of practice

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# Contents

	Page
<b>Foreword</b>	<b>v</b>
1 Scope	1
2 Normative references	1
3 Terms, definitions and symbols	4
4 Materials, fittings and accessories	12
4.1 Clay tiles and fittings (single-lap and double-lap)	12
4.2 Concrete tiles and fittings (single-lap and double-lap)	12
4.3 Fibre-cement slates and fittings	12
4.4 Natural slates and fittings	12
4.5 Bitumen shingles	12
4.6 Proprietary products	12
4.7 Wooden shingles and shakes	12
4.8 Metal tiles	12
4.9 Roofing underlay	13
4.10 Board and sheet sarking	15
<i>Table 1 — Material specifications for board and sheet sarking</i>	15
<i>Table 2 — Material specifications for insulated board sarking</i>	15
4.11 Timber battens and counterbattens	16
<i>Table 3 — Minimum timber batten sizes (roofing and vertical work)</i>	17
4.12 Mechanical fixings	19
<i>Table 4 — Dimensions of drive-in slate hooks</i>	20
<i>Figure 1 — Drive-in slate hook dimensions</i>	21
4.13 Flashings and junctions	22
4.14 Mortar	22
<i>Table 5 — Materials for flashings and junctions</i>	22
<i>Table 6 — Recommended standard mortar mixes for slating and tiling (all proportions by volume)</i>	23
4.15 Other fittings and accessories	23
5 Design criteria	27
5.1 General	27
5.2 Structural stability	27
5.3 Resistance to wind uplift	29
<i>Table 7 — Minimum spacing of nails and screws</i>	33
5.4 Rain and snow resistance	34
<i>Figure 2 — UK map of categories of exposure to driving rain</i>	35
<i>Figure 3 — Laps for centre-nailed, head-fixed and shoulder-fixed double-lap slates</i>	36
<i>Figure 4 — Lap and pitch of slates in double-lap slating</i>	37
<i>Figure 5 — Lap and pitch of tiles in double-lap plain tiles</i>	38
<i>Figure 6 — Lap and pitch of tiles in single-lap tiles</i>	39
5.5 Minimum pitch, head-laps and side-laps for roofs	42
<i>Table 8 — Values of <math>c</math> for head-lap calculations for double-lap fibre-cement and natural slates, nail-fixed or hook-fixed</i>	44
<i>Table 9 — Minimum head-laps and <math>E_1</math> factors for double-lap fibre-cement and natural slates, pegged, nailed or hook-fixed<sup>A), B), C), D), E)</sup></i>	45
5.6 Minimum head-laps, side-laps and overlaps for walls (75° pitch and above)	48
5.7 Aesthetics	48
5.8 Durability	49
5.9 Hygrothermal factors	52
5.10 Fire	53

5.11	Sound	54
5.12	Sustainability	55
6	Application and installation details	55
6.1	General	55
6.2	Underlays	55
	<i>Table 10 — Unsealed head-laps for underlay</i>	55
6.3	Battens, counterbattens and sarking boards	58
6.4	Double-lap clay and concrete plain tiles	60
6.5	Single-lap clay and concrete interlocking tiles	64
6.6	Fibre-cement slates	68
6.7	Natural slates	72
6.8	Bitumen shingles	76
6.9	Metal tiles	77
6.10	Wooden shingles and shakes	78
6.11	Other tiles and artificial slates (non-traditional)	78
6.12	Vertical (75° or steeper) slating, tiling and shingling	79
6.13	Roof drainage, flashings and weatherings	80
	<i>Figure 7 — Valley gutter with unbedded and bedded tiles or slates</i>	81
	<i>Table 11 — Minimum widths of valley gutter for different roof pitches and plan areas</i>	81
	<i>Table 12 — Minimum width of lead to line valley gutters for different roof pitches and plan areas</i>	81
6.14	Workmanship, repairs and maintenance	82
<b>Annex A</b>	<b>(normative) Method of test and verification of suitability of roof underlays for wind uplift resistance</b>	<b>84</b>
	<i>Figure A.1 — Layout of test assembly</i>	85
	<i>Figure A.2 — Cross-section of test assembly (shown with uplift pressure applied)</i>	86
	<i>Figure A.3 — Locations of nails for nailing overlap to rafter</i>	87
	<i>Figure A.4 — Design wind pressures for geographical wind zones in the UK for underlays used for specific applications conforming to conditions in A.7</i>	90
	<i>Figure A.5 — Illustration of a zonal-classification label for an underlay</i>	90
<b>Annex B</b>	<b>(normative) Design and installation of pitched roof systems where insulation is placed at rafter level</b>	<b>91</b>
	<i>Figure B.1 — Force diagram of vectored load down a roof slope</i>	94
	<i>Figure B.2 — Bending stress in a fixing through rigid insulation</i>	95
	<i>Figure B.3 — Bending moment diagram of a fixing through rigid insulation</i>	95
	<i>Figure B.4 — Deflection diagram of a fixing through rigid insulation</i>	96
<b>Annex C</b>	<b>(normative) Reinforced bitumen underlays</b>	<b>98</b>
	<i>Table C.1 — Recommendations for mass per unit area of constituent materials</i>	98
<b>Annex D</b>	<b>(normative) Permissible characteristics and defects for grading timber battens</b>	<b>99</b>
	<i>Figure D.1 — Examples of knot configurations</i>	100
	<i>Figure D.2 — Permissible wane</i>	100
	<i>Figure D.3 — Permissible depth of fissures</i>	101
	<i>Figure D.4 — Permissible slope of grain</i>	101
	<i>Figure D.5 — Permissible rate of growth</i>	101
	<i>Figure D.6 — Measurement of distortion</i>	103
<b>Annex E</b>	<b>(normative) Preservative treatment for timber battens</b>	<b>103</b>
<b>Annex F</b>	<b>(normative) Determination of batten sizes by calculation</b>	<b>104</b>
	<i>Table F.1 — GS grade bending stresses and moduli for batten timber species</i>	105

<b>Annex G</b>	(informative) <b>Examples of structural design calculations for tiling battens</b>	<b>106</b>
	<i>Figure G.1 — Loads and bending moments on roof battens</i>	106
<b>Annex H</b>	(normative) <b>Formulae and the calculation of wind loads on the underlay, sarking boards, slates, tiles, ridges, hips and valleys</b>	<b>111</b>
	<i>Table H.1 — Net uplift coefficient, <math>c_{p,net}</math> for single-lap tiles and double-lap slates</i>	112
	<i>Table H.2 — Net uplift coefficient, <math>c_{p,net}</math> for plain tiles</i>	112
	<i>Table H.3 — Summarized values of external pressure coefficient, <math>c_{pe}</math></i>	112
	<i>Figure H.1 — Key for <math>c_{p,net}</math> data for duopitch and hipped roofs</i>	113
	<i>Figure H.2 — Key for <math>c_{p,net}</math> data for monopitch roofs</i>	114
	<i>Table H.4 — Values of roof substrate shielding factor, <math>S</math></i>	115
	<i>Figure H.3 — Wind uplift loading on single-lap tiles, including where the eaves overhang exceeds 60 mm</i>	116
	<i>Figure H.4 — Wind uplift loading on double-lap slates or tiles, including where the eaves overhang exceeds 60 mm</i>	117
	<i>Figure H.5 — Wind uplift loading on single-lap tiles where the verge overhang exceeds 60 mm</i>	118
	<i>Figure H.6 — Distances around obstructions</i>	119
	<i>Figure H.7 — Wind uplift loading on ridges and hips</i>	121
	<i>Table H.5 — Design ultimate withdrawal resistance against wind loading for nails<sup>A)</sup></i>	124
	<i>Table H.6 — Design ultimate withdrawal resistance against wind loading for screws<sup>A)</sup></i>	124
	<i>Table H.7 — Values of <math>K_n</math> for tiles</i>	125
	<i>Table H.8 — Wind uplift resistance of twice nailed plain tiles</i>	126
<b>Annex I</b>	(normative) <b>Method of test for tile clip strength and calculation of wind uplift resistance for clipped single-lap tiles</b>	<b>127</b>
	<i>Figure I.1 — Example of an arrangement of the test apparatus for determination of clip strength for single-lap tiles</i>	128
	<i>Figure I.2 — Example of a hinged batten for supporting a clipped test tile</i>	129
	<i>Figure I.3 — Tiles laid in straight bond</i>	130
	<i>Figure I.4 — Tiles laid in broken (half) bond</i>	131
	<i>Table I.1 — Values of <math>k_n</math> for single-lap tile fasteners</i>	133
	<i>Figure I.5 — System of forces in an array of clipped tiles under uplift load</i>	136
<b>Annex J</b>	(normative) <b>Method of test and calculation for wind uplift resistance of drive-in hook fixings for double-lap slates</b>	<b>137</b>
	<i>Figure J.1 — Example of an arrangement of the test apparatus for determination of drive-in hook fixing strength for double-lap slates</i>	138
	<i>Table J.1 — Values of <math>k_n</math> for drive-in slate hooks</i>	140
<b>Annex K</b>	(informative) <b>Worked examples of wind uplift and fixing calculations</b>	<b>142</b>
	<i>Figure K.1 — Dimensions and forces acting on a single-lap tile</i>	143
	<i>Figure K.2 — Dimensions and forces acting on a plain tile</i>	147
	<i>Table K.1 — Wind uplift resistance of twice nailed plain tiles fixed in various patterns assuming aluminium nails meeting the recommendations of</i>	148
	<i>Table K.2 — Wind uplift resistance of twice nailed plain tiles fixed in various patterns assuming stainless steel nails meeting the recommendations of</i>	149
	<i>Figure K.3 — Dimensions and forces on centre-nailed double-lap slating with an example of drive-in slate hook arrangement</i>	154
<b>Annex L</b>	(normative) <b>Method of test for air permeability of unsealed small element roofing assemblies</b>	<b>157</b>
	<i>Figure L.1 — Arrangement of apparatus</i>	158

<i>Table L.1 — Arrangement of unsealed elements</i>	159
<i>Figure L.2 — Plenum chamber arrangement for air permeability test</i>	159
<b>Bibliography</b>	<b>162</b>

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**Summary of pages**

This document comprises a front cover, and inside front cover, pages i to vi, pages 1 to 166, an inside back cover and a back cover.

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# Foreword

## Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 August 2014. It was prepared by Subcommittee B/542/1, *Slating and tiling*, under the authority of Technical Committee B/542, *Roofing and cladding products for discontinuous laying*. A list of organizations represented on this committee can be obtained on request to its secretary.

## Supersession

BS 5534:2014+A1:2015 superseded BS 5534:2014, which was withdrawn.

BS 5534:2014+A2:2018 supersedes BS 5534:2014+A1:2015, which will be withdrawn on 1 July 2018.

## Relationship with other publications

This British Standard is intended to be read in conjunction with BS 5250, BS 9250 and BS 8000-6.

## Information about this document

Text introduced or altered by Amendments No. 1 and No. 2 is indicated in the text by tags A1 A1 and A2 A2. Minor editorial changes are not tagged.

This British Standard was first published as BS 5534-1 in April 1978 and was updated in 1990, 1997 and 2003. BS 5534-2 was first published in November 1986 and was withdrawn on publication of BS 5534-1:1997, by which it was superseded.

This is a full revision of the standard, and includes a complete re-structuring intended to make the standard more usable in addition to introducing the following principal changes.

- a) [Subclause 5.2](#) and [Annex H](#), which deal with structural stability, have been revised to reflect new knowledge and experience on wind loads and uplift resistances of the roof covering and underlay, expressed in terms of the relevant Eurocodes for basis of structural design, enhanced safety factors, loads and resistances.
- b) The worked examples of wind uplift and fixing calculations given in [Annex K](#) have been updated.
- c) Wind uplift resistance of self-supporting underlays has been included. A pressure test ([Annex A](#)) has been introduced to determine the wind uplift resistance of underlays in order to determine their scope of application and classification.
- d) Clause 6, which deals with application and design details has been revised, including references to workmanship, which are now covered in the 2013 revision of BS 8000-6.
- e) Reliance on the tensile strength of mortar bedding to resist wind uplift has been withdrawn.

Updated information relating to the preservative treatment of timber battens has been contributed by the Wood Protection Association ([www.wood-protection.org](http://www.wood-protection.org))<sup>1</sup>.

Amendment No.2 incorporates the following changes:

- Clarification of the scope of the standard in relation to its intended use for old and heritage roofs
- Additions of new terms and definitions for an air permeable underlay, and continuous and discontinuous ceilings
- Updated recommendations on the application of roofing underlays and their testing and classification for wind uplift resistance (Annex A)
- Updated Annex I and method of test for tile clip strength including amendments to Figures I.1, I.2 and I.5
- Minor corrections and updated references to new standards and publications, including BS 8612, *Dry-fixed ridge, hip, and verge systems for slating and tiling – Specification*.

**Product certification.** Designers and specifiers are advised to consider the desirability of using roofing products, fittings and accessories that are supported by recognized UKAS-accredited third-party assessment.

### **Use of this document**

As a code of practice, this British Standard takes the form of guidance and recommendations. It should not be quoted as if it were a specification and particular care should be taken to ensure that claims of compliance are not misleading.

Any user claiming compliance with this British Standard is expected to be able to justify any course of action that deviates from its recommendations.

### **Presentational conventions**

The provisions of this standard are presented in roman (i.e. upright) type. Its recommendations are expressed in sentences in which the principal auxiliary verb is “should”.

*Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.*

Where words have alternative spellings, the preferred spelling of the Shorter Oxford English Dictionary is used (e.g. “organization” rather than “organisation”).

In the case of “sulfur” (and its derivatives), the International Union of Pure and Applied Chemistry (IUPAC) spelling is used.

### **Contractual and legal considerations**

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

### **Compliance with a British Standard cannot confer immunity from legal obligations.**

Particular attention is drawn to the Control of Substances Hazardous to Health Regulations 2002 [1].

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<sup>1</sup> Last accessed 26 August 2014.

## 1 Scope

**A2** This British Standard gives recommendations primarily intended for the design, performance and installation of new build pitched roofs, including vertical cladding, and for normal re-roofing work, including repairs, using slates, tiles, shingles and shakes and their associated components. This British Standard does not cover the structural design of the roof.

The recommendations contained in this British Standard might not be appropriate for the re-slating or re-tiling of some old roofs, particularly where traditional and/or reclaimed materials are used. Users intending to adopt any of these recommendations for old roofs, and especially for historically or architecturally important buildings, are advised to consult with the local planning authority or an appropriate conservation organization to check their suitability.

This British Standard is intended for use by designers, manufacturers and installers of roofing products.

*NOTE 1 Recommendations for workmanship, repair and maintenance are given in BS 8000-0 and BS 8000-6.*

*NOTE 2 A Code of Practice for slating historic buildings is in preparation by Historic England<sup>2</sup>. **A2***

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

### Standards publications

BS 416-1, *Discharge and ventilating pipes and fittings, sand-cast or spun in cast iron — Part 1: Specification for spigot and socket systems*

BS 1202-2, *Specification for nails — Part 2: Copper nails*

BS 1202-3, *Specification for nails — Part 3: Aluminium nails*

BS 2000-49, (BS EN 1426), *Bitumen and bituminous binders — Part 49: Determination of needle penetration*

BS 2000-58, (BS EN 1427), *Bitumen and bituminous binders — Part 58: Determination of the softening point — Ring and ball method*

BS 4841-5, *Rigid polyisocyanurate (PIR) and polyurethane (PUR) products for building end-use applications — Part 5: Specification for laminated boards (roofboards) with auto-adhesively or separately bonded facings for use as thermal insulation boards for pitched roofs*

BS 5250, *Code of practice for control of condensation in buildings*<sup>3</sup>

BS 6100-6, *Building and civil engineering — Vocabulary — Part 6: Construction parts*

BS 8000-6, *Workmanship on building sites — Code of practice for slating and tiling of roofs and claddings*<sup>4</sup>

BS 8417, *Preservation of wood — Code of practice*

**A2** BS 8612, *Dry-fixed ridge, hip, and verge systems for slating and tiling — Specification* **A2**

BS 9250, *Code of practice for design of the airtightness of ceilings in pitched roofs*

<sup>2</sup> **A2** Historic England – [www.historicengland.org.uk](http://www.historicengland.org.uk) (last viewed 30 January 2018). **A2**

<sup>3</sup> This standard also gives informative references to BS 5250:2011.

<sup>4</sup> This standard also gives an informative reference to BS 8000-6:2013.