

BS 5534:2014+A2:2018



BSI Standards Publication

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

**bsi.**

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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.

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BS 5534:2014+A1:2015 superseded BS 5534:2014, which was withdrawn.

BS 5534:2014+A2:2018 supersedes BS 5534:2014+A1:2015, which will be withdrawn on 1 July 2018.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 9233 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  $\square_{A1}$   $\square_{A1}$  and  $\square_{A2}$   $\square_{A2}$ . 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 BS 5534-2 was first published in November 1986 and was withdrawn on publication of BS 5534-1:1997, by which it was superseded.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 for 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 type 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 “sulphur” (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].

<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. **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 6100-3, *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.