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Preservation of wood – Code of practice

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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 2024. It was prepared by Technical Committee B/515, *Wood Preservation*. A list of organizations represented on this committee can be obtained on request to the committee manager.

Supersession

This British Standard supersedes [BS 8417:2011+A1:2014](#), which is withdrawn.

Relationship with other publications

This British Standard is one of a group of documents dealing with the preservative treatment of wood. It is based on the principles given in [BS EN 599-1](#), [BS EN 351-1](#) and [BS EN 335](#), developed to support product standards mandated in England, Scotland and Wales (Great Britain) by The Construction Products (Amendment etc.) (EU Exit) Regulations 2019 [1] and in the EU (including Northern Ireland) by the Construction Products Regulation [2]. This British Standard is the national interpretative document for [BS EN 599-1](#) and [BS EN 351-1](#), and is intended to provide complementary information relevant to the wood treater and to the specifier or purchaser of treated wood for use in the United Kingdom.

Information about this document

This is a full revision of the document, and introduces the following principal changes:

- a) [Table 2](#) has been updated, with most changes made to the “Need for preservation” column;
- b) [Annex A](#) and [Annex B](#) have been introduced on the performance of wood products in service and the natural durability recommendations for timber components;
- c) a note has been added in [5.2](#) on warranties in response to criticism that desired service life does not guarantee a service life;
- d) [Figure 1](#) has been added to [Clause 7](#) to illustrate a penetration pattern conforming to NP7;
- e) [Table 3](#) has been updated to include the drying characteristics of small section wood in use class 3; cross-laminated timber is omitted from the treatment recommendations and is replaced with a note; treatment recommendations for cooling tower material are omitted; and
- f) Table 5 in BS 8417:2011+A1:2014 has been removed as no such preservatives appear to be in commercial use.

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Where websites and webpages have been cited, they are provided for ease of reference and are correct at the time of publication. The location of a webpage or website, or its contents, cannot be guaranteed.

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

Users may substitute any of the recommendations in this British Standard with practices of equivalent or better outcome. 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 document 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”).

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1 Scope

This British Standard gives recommendations and guidance for the preservative treatment of wood to provide protection against biodeterioration in end-use situations. It gives recommendations for determining the need for treatment and for specifying the type of treatment.

This British Standard also recommends levels for the penetration and retention requirements of preservatives tested to [BS EN 599-1](#) and creosote preservatives, using the terminology in [BS EN 351-1](#), for different timber components. It also takes into account the natural durability and treatability of the wood employed, the use class as defined in [BS EN 335](#) and the desired service life. It also provides guidance on establishing whether a specified level of treatment has been achieved.

This British Standard does not include precise treatment parameters to achieve the recommended penetrations and retentions.

NOTE 1 It is the responsibility of the treater to use wood in an appropriate condition and to use an appropriate treatment schedule to achieve the recommended values of penetration and retention.

This British Standard applies to solid wood and glued laminated wood (Glulam).

This British Standard does not apply to:

- a) wood-based panel products;

NOTE 2 Guidance on treatment is given in the Wood Protection Association Guidance note TW 15 [3].

- b) wood that has been modified by physical, biological or non-biocidal chemical techniques in order to enhance its performance; or

NOTE 3 Guidance on cross-laminated timber (CLT) is given in [Annex A](#).

- c) curative treatments.

NOTE 4 Only preservatives approved under the Control of Pesticides Regulations 1986 (as amended) [4] or authorized in Great Britain under The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2020 [5] or (in Northern Ireland) under the Biocidal Products Regulation [6] are permitted for the treatment of wood in the United Kingdom.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes provisions, or limits the application, of this document¹⁾. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

[BS EN 335](#), *Durability of wood and wood-based products – Use classes: definitions, application to solid wood and wood-based products*²⁾

[BS EN 350](#), *Durability of wood and wood-based products – Testing and classification of the durability to biological agents of wood and wood-based materials*

[BS EN 351-1](#), *Durability of wood and wood-based products – Preservative-treated solid wood – Part 1: Classification of preservative penetration and retention*

¹⁾ Documents that are referred to solely in an informative manner are listed in the Bibliography.

²⁾ This standard gives an informative reference to [BS EN 335:2013](#).

[BS EN 351-2](#), *Durability of wood and wood-based products – Preservative-treated solid wood – Part 2: Guidance on sampling for the analysis of preservative-treated wood*³⁾

[BS EN 599-1](#), *Durability of wood and wood-based products – Efficacy of preventive wood preservatives as determined by biological tests – Part 1: Specification according to use class*⁴⁾

[BS EN 13183](#) (all parts), *Moisture content of a piece of sawn timber*

[BS EN 13991](#), *Derivatives from coal pyrolysis – Coal tar based oils: creosotes – Specifications and test methods*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in [BS EN 351-1](#) and the following apply.

3.1 acceptable quality level (AQL)

maximum percentage of units in a batch of treated wood which is allowed to fall below the specified penetration without causing the batch to be rejected

3.2 critical value (cv)

value equivalent to the highest biological reference value (in g/m² or kg/m³) obtained from all the biological tests carried out in accordance with [BS EN 599-1](#) for any given use class

NOTE The critical value varies according to use class, method of application and organisms against which the preservative is to provide protection from and whether it is to be applied to softwood or hardwood.

[SOURCE: [BS EN 1001-2:2005](#), 4.18]

3.3 penetration requirement

minimum depth to which the active ingredient(s) of the wood preservative is (are) required to penetrate the wood

[SOURCE: [BS EN 1001-2:2005](#), 4.59]

NOTE The term “penetration requirement” relates to the treatment specification (see [Clause 5](#) and [Clause 6](#)) rather than a provision of this standard.

3.4 retention requirement

loading of the wood preservative product that is required in the analytical zone

NOTE 1 The retention requirement is expressed in grams of product per square metre for superficial application processes and kilograms of product per cubic metre for penetrating treatment processes. It is derived from the critical value in different ways depending upon the particular test involved.

[SOURCE: [BS EN 1001-2:2005](#), 4.73]

NOTE 2 The term “retention requirement” relates to the treatment specification (see [Clause 5](#) and [Clause 6](#)) rather than a provision of this standard.

³⁾ This standard gives an informative reference to [BS EN 351-2:2023](#).

⁴⁾ This standard gives an informative reference to [BS EN 599-1:2009+A1:2013](#).