

Specification for

Preparations of wood preservatives in organic solvents

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee B/515, Wood preservation, upon which the following bodies were represented:

- British Telecommunications plc
- British Wood Preserving and Damp-proofing Association
- Chemical Industries Association
- Creosote Council
- Department of the Environment (Building Research Establishment)
- Timber Research and Development Association
- Timber Trade Federation
- Wood Panel Industries Federation

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

- Association of Consulting Scientists
- ITRI Ltd.
- Ministry of Defence

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Foreword

This revision of BS 5707 has been prepared by Technical Committee B/515. This standard supersedes BS 5707 : Parts 1, 2 and 3, which are withdrawn. This revision takes account of European Standards on wood preservation produced by CEN Technical Committee CEN/TC38 and is produced in a single part, combining the specifications for preservative solutions and providing guidance on suitable methods of treatment in annex A.

Consideration was given to the inclusion of a requirement for the compatibility with paint. However, it was not found possible to include a test suitable to represent the many different painting practices in use. Similarly, no test is available that gives generally useful information on the effectiveness of water repellents, which are often included in the solutions specified in this standard.

CAUTION. Attention is drawn to the Health and Safety at Work etc. Act 1974, and the need for ensuring that the methods specified in this British Standard are carried out with suitable precautions.

The procedures described in this British Standard are intended to be carried out by appropriately qualified and experienced persons or other suitably trained and/or supervised personnel. Normal safety precautions should be used throughout the use of the methods.

Materials conforming to this specification and used as a wood preservative require government approval under the Control of Pesticides Regulations 1986 (SI 1510) before they can be sold, supplied, stored, advertised or used in the United Kingdom.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, an inside back cover and a back cover.

1 Scope

This British Standard specifies requirements for preparations of chemicals in organic solvents intended for application to timber to preserve it against attack in service by wood-destroying fungi and/or insects. These preparations are not suitable for all purposes, and reference should be made to commodity standards or codes of practice for information about their suitability for any particular purpose.

NOTE. Coloured preparations, for example those containing dyes or pigments, may not be suitable for use with timber that is to be painted. Pentachlorophenol in heavy oil cannot be used with timber that is to be painted or used in domestic dwellings. Specific advice regarding suitability should be obtained from the product supplier.

This standard includes those formulations that are used generally for pretreatment or maintenance (preventative) procedures. It does not address formulations for use in remedial (curative) treatments.

2 References

2.1 Normative references

This British Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are made at the appropriate places in the text and the cited publications are listed on the inside back cover. For dated references, only the edition cited applies; any subsequent amendments to or revisions of the cited publication apply to this British Standard only when incorporated in the reference by amendment or revision. For undated references, the latest edition of the publication referred to applies, together with any amendments.

2.2 Informative references

This British Standard refers to other publications that provide information or guidance. Editions of these publications current at the time of issue of this standard are listed on the inside back cover, but reference should be made to the latest editions.

3 Definitions

For the purposes of this British Standard the following definitions apply.

3.1 bloom

Crystals or other visible deposits from a preservative remaining on the surface of treated wood as a result of evaporation of solvent.

3.2 tack

Perceived stickiness on the surface of wood impregnated with a preservative following evaporation of solvent.

4 Active ingredients

NOTE. Methods of analysis for some of the active ingredients defined in clause 4 can be found in Parts of BS 5666.

4.1 *Acypetacs zinc*. The zinc salt of a mixture of C₈ to C₁₀ linear and branched chain saturated aliphatic carboxylic acids; the branched chain acids predominating and consisting of equal parts by weight of:

- a) acids in which the main chain is dialkyl-substituted on the second carbon atom; and
- b) acids in which the second carbon atom is either unsubstituted or monoalkyl-substituted.

NOTE. Both acids may be further alkyl-substituted on the third or higher carbon atoms.

The molecular weight of the mixture of acids lies between 157 and 171. The total zinc content is a minimum of 20.0 % (m/m) and purity is a minimum of 99 % (m/m).

4.2 *Copper naphthenate*. A mixture of the copper salts of naturally-occurring naphthenic acids (naturally occurring carboxylic acids extracted from petroleum oils), conforming to BS 3769 : 1964.

NOTE. Commercial products are available with copper contents of 6 % (m/m) and 8 % (m/m).

4.3 *Cypermethrin* (C₂₂H₁₉NC₂O₃). A yellow viscous liquid, essentially a mixture of the isomers of *a*-cyano-3-phenoxybenzyl-2,2-dimethyl-3-(2,2-dichlorovinyl)-cyclopropane carboxylate having an isomer mix of a minimum of 35 % (m/m) *cis* isomers and a maximum of 65 % (m/m) *trans* isomers with a total isomer content of not less than 90 % (m/m).

4.4 *Lindane* (C₆H₆Cl₆). A white crystalline solid containing not less than 99.5 % (m/m) of the *γ*-isomer of 1,2,3,4,5,6-hexachlorocyclohexane.

4.5 *Pentachlorophenol* (C₆Cl₅OH). Total chlorophenol content of not less than 96 % (m/m), expressed as pentachlorophenol, of which not less than 84 % (m/m) is pentachlorophenol and not more than 10 % (m/m) tetrachlorophenols, and free from 2,3,7,8-tetrachlorodibenzo-*p*-dioxin isomers to a detection limit of 10⁻⁷ % (m/m). The total content of hexachlorodibenzo-*p*-dioxins is less than 4 × 10⁻⁴ % (m/m). The product shall not contain more than 0.5 % (m/m) of material insoluble in a sodium hydroxide solution (5 g NaOH in 100 ml water) when tested according to the method in annex B of BS 3175 : 1959.

NOTE. For the analysis of dioxin concentrations, methods published by the USA Environmental Protection Agency can prove suitable. Refer to US EPA Method 1613 [1].