AS 1604.1—2000
(Incorporating Amendment No. 1)

Australian Standard™

Specification for preservative treatment

Part 1: Sawn and round timber

Standards Australia

This Australian Standard was prepared by Committee TM/6, Timber Preservation and Durability. It was approved on behalf of the Council of Standards Australia on 28 April 2000 and published on 26 June 2000.

The following interests are represented on Committee TM/6:

CSIRO Forestry and Forest Products

Housing Industry Association, Australia

Institution of Engineers, Australia

National Registration Authority for Agricultural and Veterinary Chemicals

New Zealand Forest Research Institute

New Zealand Timber Industry Federation

New Zealand Timber Preservation Council

Plywood Association of Australia

Queensland Forest Research Institute

State Forests of New South Wales

Timber Preservers Association of Australia

Timber Promotion Council

Timber Research and Development Advisory Council of Queensland

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TM/6, Timber Preservation, to supersede AS 1604—1997, *Timber—Preservative-treated—Sawn and round*.

This Standard incorporates Amendment No. 1 (April 2001). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure, or part thereof affected.

This Standard is the result of a consensus among Australian and New Zealand representatives on the Joint Committee to produce it as an Australian Standard.

The objective of this Standard is to specify requirements for preservative-treated sawn and round timber for protection against decay, insect or marine borer attack.

The objectives of this revision are to —

(a) incorporate the changes in Amendment No. 1 (issued on 5 July 1998);

(b) update retention levels for ammoniacal copper quaternary (ACQ) in hazard classes H3 and H4;

(c) include copper azole treatment for hazard classes H3 and H4; and

(d) include preservative specification for high temperature creosote originally given in AS 1143—1973, *High temperature creosote for the preservation of timber*.

This Standard is the first part in the AS 1604 series of Standards, which covers specification for preservative treatment of timber products, as follows:

AS 1604	Specification for preservative treatment
AS 1604.1	Part 1: Sawn and round timber
AS/NZS 1604.2	Part 2: Reconstituted wood-based products
AS/NZS 1604.3	Part 3: Glued veneer-based products

This Standard does not specify the methods of preservative treatment that may be adopted to achieve the specified penetrations and retentions. Where the user is uncertain of the appropriate preservative treatment, additional information may be obtained from organizations such as state and territory forestry authorities, and the CSIRO Forestry and Forest Products.

Preservatives not covered in this edition, and which may have general application, should be brought to the attention of Standards Australia for consideration for inclusion in future editions.

The following colour page coding is used to differentiate the six hazard classes for the purpose of user friendliness:

(i) *Orange* — Hazard class selection guide.

(ii) *Yellow* — Hazard class 1.

(iii) *Blue* — Hazard class 2.

(iv) *Pink* — Hazard class 3.

(v) *Green* — Hazard class 4.

(vi) *Cream* — Hazard class 5.

(vii) *Grey* — Hazard classes 6.

Statements expressed in mandatory terms in notes to tables are deemed to be an integral part of this Standard.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

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FOREWORD

The purpose of preservation is to extend the life of timber by protecting it from decay and insect or marine borer attack. This increases the range for the end application of timber and renders it a more useful and dependable material for construction, building and engineering purposes.

The service life of timber depends on a variety of factors. These include the natural durability of the timber species commercially available, as described in Appendix F, the degree of preservative treatment, and the range of hazards and type of environment anticipated during the service life of the timber. In addition, the severity of exposure can be reduced by alternative design. Regular inspection and maintenance procedures will assist to minimize the effects of exposure.

In all conditions of use, the untreated sapwood of any timber species can be considered to be non-durable, as it is susceptible to degradation by insects or fungi, or both. Sapwood can be made as durable as the heartwood of most of the naturally durable species by correct preservative treatment. Service life may depend upon the wood having been ripped, crosscut, shaped, bored, machined or having had any such operations or processes carried out before preservative treatment. Where subsequent machining is unavoidable, supplementary protection should be applied to the cut surface; however, this protection cannot be expected to be as effective as the original recommended treatment.

STANDARDS AUSTRALIA

Australian Standard
Specification for preservative treatment

Part 1: Sawn and round timber

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for preservative treatment for sawn and round timber that is required to be protected against decay, insect or marine borer attack for all exposure conditions throughout Australia.

NOTE: Limitations described in Clause 1.3 should be considered.

This Standard does not cover grade or seasoning condition.

1.2 APPLICATION

This Standard, in conjunction with AS/NZS 1605, is intended for application throughout Australia.

The following methods specify the preservative penetration of heartwood for the protection of sawn timber to be used in hazard classes 2, 3, 4, 5 and 6:

(a) *Envelope treatment* An unbroken envelope of preservative around the piece of sawn timber to the depth specified for each hazard class.

(a) *Limiting unpenetrated heartwood* Restricting the amount of unpenetrated heartwood in the cross-section to the extent specified for each hazard class.

1.3 LIMITATIONS

For the purpose of this Standard, the following should be considered:

(a) This Standard covers the application of preservatives to timber components intended for a very wide range of end uses. Where the consequences of component failure are high, such as with structural members, it is important to be able to predict the performance of these preservative-treated members with some confidence.

(b) The references in this Standard to the penetration of heartwood with preservatives represent the minimum specification requirements for the several hazard conditions. Under the routine commercial conditions of timber preservation, these penetrations may not be achieved as a predictable and, therefore, reliable commercial practice. This should be taken into consideration when designing structural members.

(c) Designers and users should satisfy themselves, through appropriate sampling and testing, that the preservative in any structural timber complies with the specifications in this Standard.

(d) Knots are not considered as typical of the treated timber and may have different treatment characteristics from clear wood. The visual grading rules for structural timber make allowance for the strength reducing effects of the knots and knotholes in the timber piece. Because these grading rules do not differentiate between knots and knotholes, the possible loss of the knot from the piece will not reduce its visual

