

AS/NZS 2924.7:2024
ISO 4586-7:2018



Australian/New Zealand Standard™

High-pressure decorative laminates (HPL, HPDL) — Sheets based on thermosetting resins (usually called laminates)

Part 7: Classification and specifications for design laminates (ISO 4586-7:2018, IDT)



AS/NZS 2924.7:2024

This Joint Australian/New Zealand Standard™ was prepared by Joint Technical Committee TM-011, Engineered Timber Products. It was approved on behalf of Standards Australia's Standards Development and Accreditation Committee on 16 January 2024 and by the New Zealand Standards Approval Board on 13 December 2023.

This Standard was published on 9 February 2024.

The following are represented on Committee TM-011:

- Australian Forest Products Association
- Australian Timber Importers Federation
- Building Research Association of New Zealand (BRANZ)
- Department of Agriculture, Fisheries and Forestry (QLD)
- Engineered Wood Products Association of Australasia
- Forest and Wood Products Australia
- Frame & Truss Manufacturers Association Australia
- Glued Laminated Timber Association of Australia
- New Zealand Plywood Manufacturers Association
- New Zealand Timber Industry Federation
- Timber Design Society, New Zealand
- Timber Development Association (NSW)
- Timber Queensland
- University of Canterbury New Zealand
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This Standard was issued in draft form for comment as DR AS/NZS 2924.7:2023.

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ISBN 978 1 76139 502 4

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First published as AS/NZS 2924.7:2024.

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Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TM-011, Engineered Timber Products.

The objective of this document is to specify requirements to laminates intended for interior use with a design effect surface having a phenolic based core and a decorative surface, not covered by AS/NZS 2924.3:2024 through AS/NZS 2924.6:2024 and AS/NZS 2924.8:2024. Three surface material types (metal, wood veneer, and pearlescent décor) are defined in this document.

AS/NZS 2924.2:2024 specifies the methods of test relevant to this document.

This document is identical with, and has been reproduced from, ISO 4586-7:2018, *High-pressure decorative laminates (HPL, HPDL) — Sheets based on thermosetting resins (usually called laminates) — Part 7: Classification and specifications for design laminates*.

As this document has been reproduced from an International document, a full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms “normative” and “informative” are used in Standards to define the application of the appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 11, *Products*.

This second edition cancels and replaces the first edition (ISO 4586-7:2015), which has been technically revised.

The main changes compared to the previous edition are as follows:

- correction of errors due to typographical, formatting, and omission issues.

A list of all parts in the ISO 4586 series can be found on the ISO website.

Introduction

High-pressure decorative laminates are characterized by their qualities, durability, and functional performance. High-pressure laminates sheet are available in a wide variety of colours, patterns, and surface finishes. They are resistant to wear, scratching, impact, moisture, heat, and staining; and possess good hygienic and anti-static properties, being easy to clean and maintain.

In an effort to harmonize ISO 4586 with other high-pressure decorative laminate standards, multiple methods may be published that demonstrate similar properties. In these instances, the same test method title is given and is annotated as either “Method A” or “Method B”. This is the case in the following tests: Edge squareness — 8/9, Dry heat — 17/18 Dimensional stability at elevated temperatures — 19/20, Dimensional stability at ambient temperature — 21/22, Staining — 30/31, Lightfastness — 32/33, Formability — 38/39, and Blistering — 40/41. In these instances, either method may be utilized in testing. Compliance to both methods is not required. While these tests are similar they are by no means identical and results of one method do not necessarily correspond to the results of the accompanying test. In these situations, it is intended that the documentation in specific parts of ISO 4586 for performance requirements be consulted. Each specific method has performance requirements particular to that method for individual grades of high-pressure decorative laminate.

This document has been harmonized with EN 438-8 whenever possible.

NOTES

Australian/New Zealand Standard

High-pressure decorative laminates (HPL, HPDL) — Sheets based on thermosetting resins (usually called laminates)

Part 7: Classification and specifications for design laminates (ISO 4586-7:2018, IDT)

1 Scope

This document applies to laminates intended for interior use with a design effect surface having a phenolic based core and a decorative surface, not covered by ISO 4586-3 through ISO 4586-6 and ISO 4586-8. Three surface material types (metal, wood veneer, and pearlescent décor) are defined in this document.

ISO 4586-2 specifies the methods of test relevant to this document.

2 Normative references

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

ISO 178, *Plastics — Determination of flexural properties*

ISO 1183-1, *Plastics — Methods for determining the density of non-cellular plastics — Part 1: Immersion method, liquid pycnometer method and titration method*

ISO 4586-2:2018, *High-pressure decorative laminates (HPL, HPDL) — Sheets based on thermosetting resins (usually called laminates) — Part 2: Determination of properties*

ISO 11664-2, *Colorimetry — Part 2: CIE standard illuminants*

EN 12722¹⁾, *Furniture — Assessment of surface resistance to dry heat*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

high-pressure decorative laminate

HPL

HPDL

sheet consisting of layers of cellulosic fibrous material (normally paper) impregnated with thermosetting resins and bonded together by the *high pressure process* ([3.2](#))

Note 1 to entry: This is a general definition of high-pressure decorative laminate(s). More specific product definitions can be found in ISO 4586-3 to ISO 4586-8.

Note 2 to entry: The back of the sheet(s) is made suitable for adhesive bonding to a substrate.

1) ISO 4211-2:1993 modified.