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

**Part 2:
Determination of properties**

*Stratifiés décoratifs haute pression (HPL, HPDL) — Plaques à base de
résines thermodurcissables (communément appelées stratifiés) —*

Partie 2: Détermination des caractéristiques



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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

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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. 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. www.iso.org/patents

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 61, *Plastics*, Subcommittee SC 11, *Products*.

ISO 4586 consists of the following parts, under the general title *Plastics — High-Pressure Decorative Laminates (HPL, HPDL) — Sheets based on Thermosetting Resins (Usually called Laminates)*:

- *Part 1: Introduction and General Information*
- *Part 2: Determination of Properties*
- *Part 3: Classification and Specifications for Laminates less than 2 mm Thick Intended for Bonding to Supporting Substrates*
- *Part 4: Classification and Specifications for Compact Laminates of Thickness 2 mm and Greater*
- *Part 5: Classification and Specifications for Flooring Grade Laminates less than 2 mm Thick Intended for Bonding to Supporting Substrates*
- *Part 6: Classification and Specifications for Exterior-Grade Compact Laminates of Thickness 2 mm and Greater*
- *Part 7: Classification and Specifications for Design Laminates*
- *Part 8: Classification and Specifications for Alternative Core Laminates*

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

Part 2: Determination of properties

1 Scope

This part of ISO 4586 specifies the methods of test for determination of the properties of High-Pressure Decorative Laminates (HPL, HPDL) as defined in [Clause 3](#). These methods are primarily intended for testing the sheets specified from ISO 4586-3 to ISO 4586-8[8] to [13].

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, Cigarette Burns - 36/37, 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, consult the documentation in specific sections of ISO 4586 for performance requirements. Each specific method has performance requirements particular to that method for individual grades of high-pressure decorative laminate.

The precision of the test methods specified in [Clauses 5, 6, 7, 8, 9, 10, 13, 14, 16, 19, 20, 21, 22, 24, 25, 26, 40, and 41](#) of this part of ISO 4586 is not known because inter-laboratory data are not available. When inter-laboratory data are obtained, precision statements will be added to the test methods at the following revision. As all the other test methods have an end point determination based on subjective judgement, it is not meaningful to make a statement of precision in these cases.

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.

ISO 62, *Plastics — Determination of water absorption*

ISO 178, *Plastics — Determination of flexural properties*

ISO 291, *Plastics — Standard atmospheres for conditioning and testing*

ISO 3668, *Paints and varnishes -- Visual comparison of the colour of paints*

ISO 4892-1, *Plastics — Methods of exposure to laboratory light sources — Part 1: General guidance*

ISO 4892-2, *Plastics — Methods of exposure to laboratory light sources — Part 2: Xenon-arc lamps*

ISO 4892-3, *Plastics — Methods of exposure to laboratory light sources - Part 3: Fluorescent UV lamps*

ISO 6506-1, *Metallic materials — Brinell hardness test — Part 1: Test method*

ISO 9352, *Plastics — Determination of resistance to wear by abrasive wheels*