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

**Part 8:
Classification and specifications for
alternative core laminates**

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

*Partie 8: Classification et spécifications des différents modes de
base laminés*



This document is a preview generated by ERS



COPYRIGHT PROTECTED DOCUMENT

© ISO 2018

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

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

Published in Switzerland

Contents

	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Material types	2
5 Requirements	3
5.1 Compliance.....	3
5.2 Inspection requirements	3
5.2.1 General.....	3
5.2.2 Colour, pattern and surface finish.....	3
5.2.3 Surface finish.....	3
5.2.4 Reverse side.....	3
5.2.5 Visual inspection	4
5.3 Dimensional tolerance requirements	4
5.3.1 Dimensional tolerance requirements for coloured core laminates.....	4
5.3.2 Dimensional tolerance requirements for metal reinforced core laminates.....	5
5.4 Test requirements	6
5.4.1 General requirements for coloured core laminates	6
5.4.2 General requirements for metal reinforced core laminates	10
5.4.3 Reaction to fire	15
Annex A (informative) Addendum to 5.4.3, relating to fire performance	16
Bibliography	18

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 4586-8:2015), 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. HPL sheets 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 438-9 whenever possible.

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

Part 8: Classification and specifications for alternative core laminates

1 Scope

This document specifies performance requirements for high-pressure decorative laminates (HPL, HPDL) intended for interior use that have core compositions not covered by ISO 4586-1 through ISO 4586-7. The core composition types (coloured core and metal reinforced core) 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 527-2, *Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics*

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 12572, *Hygrothermal performance of building materials and products — Determination of water vapour transmission properties — Cup method*

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>