



BSI Standards Publication

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

Part 8: Classification and specifications for design laminates

National foreword

This British Standard is the UK implementation of EN 438-8:2018. It supersedes BS EN 438-8:2009, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/76, Laminated sheet for decorative purposes.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Amendments/corrigenda issued since publication

Date	Text affected
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English Version

High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (usually called laminates) - Part 8: Classification and specifications for design laminates

Stratifiés décoratifs haute pression (HPL) -
Plaques à base de résines thermodurcissables
(communément appelées stratifiés) - Partie
8 : Classification et spécifications relatives
aux stratifiés à effets de surface spéciaux

Dekorative Hochdruck-Schichtpressstoffplatten
(HPL) - Platten auf Basis härtpbarer Harze
(Schichtpressstoffe) - Teil 8: Klassifizierung und
Spezifikationen für Design-Schichtpressstoffe

This European Standard was approved by CEN on 28 September 2018.

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European foreword

This document (EN 438-8:2018) has been prepared by Technical Committee CEN/TC 249 “Plastics”, the secretariat of which is held by NBN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2019, and conflicting national standards shall be withdrawn at the latest by May 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes [EN 438-8:2009](#).

In comparison with the previous edition, the following technical modifications have been made:

The test methods referenced have been updated as appropriate; the terms, definitions, symbols and abbreviations are aligned with the other parts of the EN 438 published; the machined crosshead speed for the determination of the flexural characteristics, is the same of the one specified in EN 438-4:2016.

EN 438, *High-pressure decorative laminates (HPL) — Sheets based on thermosetting resins (usually called laminates)*, consists of the following parts:

- *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: Compact laminate and HPL composite panels for internal and external wall and ceiling finishes;*
- *Part 8: Classification and specifications for design laminates;*
- *Part 9: Classification and specifications for alternative core laminates.*

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This document specifies performance requirements for design laminates intended for interior use with a design effect surface having a phenolic based core and a decorative surface, not covered by [EN 438-3](#) [1], [EN 438-4](#) [2], [EN 438-5](#) [3] and [EN 438-6](#) [4]. Three surface layer types (metal, wood veneer and pearlescent decor) are defined in this part of EN 438.

[EN 438-2](#) specifies the test methods relevant to this part of EN 438.

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.

EN 438-2:2016, *High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (usually called laminates) – Part 2: Determination of properties*

EN ISO 178, *Plastics - Determination of flexural properties (ISO 178)*

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

3 Terms, definitions, symbols and abbreviations

3.1 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 <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1.1

high-pressure decorative design laminate
design laminate
HPL

sheet consisting of decorative design surface layer(s) and core layers bonded together by an high pressure process

NOTE Typical values for the high pressure process are a temperature of ≥ 120 °C and a pressure of ≥ 5 MPa.

3.1.2

surface layer

upper decorative layer consisting in one or more sheets of fibrous material (usually paper) impregnated with aminoplastic thermosetting resins (usually melamine based resins)

NOTE The surface layers appear on one or both side(s) of the laminate(s). They are not necessarily treated with thermosetting resin. In case of one-sided laminates, the back of the sheet(s) can be made suitable for adhesive bonding to a substrate.

3.1.3

Types of high-pressure decorative design laminates