

High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (Usually called Laminates) - Part 4: Classification and specifications for compact laminates of thickness 2 mm and greater

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 438-4:2016 sisaldab Euroopa standardi EN 438-4:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 438-4:2016 consists of the English text of the European standard EN 438-4:2016.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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English Version

High-pressure decorative laminates (HPL) - Sheets based
on thermosetting resins (usually called laminates) - Part 4:
Classification and specifications for compact laminates of
thickness 2 mm and greater

Stratifiés décoratifs haute pression (HPL) - Plaques à
base de résines thermodurcissables (communément
appelées stratifiés) - Partie 4: Classification et
spécifications des stratifiés compacts d'épaisseur égale
ou supérieure à 2 mm

Dekorative Hochdruck-Schichtpressstoffplatten (HPL)
- Platten auf Basis härthbarer Harze (Schichtpressstoffe)
- Teil 4: Klassifizierung und Spezifikationen für
Kompakt-Schichtpressstoffe mit einer Dicke von 2 mm
und größer

This European Standard was approved by CEN on 13 December 2015.

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European foreword

This document (EN 438-4:2016) 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of an identical text or by endorsement, at the latest by August 2016, and conflicting national standards shall be withdrawn at the latest by August 2016.

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

This document supersedes EN 438-4:2005.

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*

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1 Scope

This European Standard specifies performance requirements for two types of compact laminate of thickness 2 mm or greater produced by using a high pressure process intended for interior use .

High-pressure decorative Compact laminates are characterised by their aesthetic qualities, strength, durability and functional performance. Compact HPL sheets are available in a wide variety of colours, patterns and surface finishes; they are extremely strong, and resistant to wear, impact, scratching, moisture, heat and staining; and possess good hygienic and anti-static properties, being easy to clean and maintain.

EN 438-2 specifies the methods of test relevant to this European Standard.

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.

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

EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*

EN 13722, *Furniture — Assessment of the surface gloss*

EN 61340-4-1, *Electrostatics — Part 4-1: Standard test methods for specific applications — Electrical resistance of floor coverings and installed floors (IEC 61340-4-1)*

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)*

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

3 Terms, definitions, symbols and abbreviations

3.1 Terms and definitions

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

3.1.1

high-pressure decorative laminate(s)

HPL

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

Note 1 to entry: 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)