Irish Standard
I.S. EN 438-6:2016

High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (usually called laminates) - Part 6: Classification and specifications for Exterior-grade compact laminates of thickness 2 mm and greater

I.S. EN 438-6:2016

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN 438-6:2016 is the adopted Irish version of the European Document EN 438-6:2016, High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (usually called laminates) - Part 6: Classification and specifications for Exterior-grade compact laminates of thickness 2 mm and greater

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 438-6

February 2016

ICS 83.140.20

Supersedes EN 438-6:2005

English Version

High-pressure decorative laminates (HPL) - Sheets based on thermosetting resins (usually called laminates) - Part 6: Classification and specifications for Exterior-grade compact laminates of thickness 2 mm and greater

Stratifiés décoratifs haute pression (HPL) - Plaques à base de résines thermodurcissables (communément appelées stratifiés) - Partie 6: Classification et spécifications des stratifiés compacts pour usage en extérieur d'épaisseur égale ou supérieure à 2 mm

Dekorative Hochdruck-Schichtpressstoffplatten (HPL) - Platten auf Basis härtbarer Harze (Schichtpressstoffe) - Teil 6: Klassifizierung und Spezifikationen für Kompakt-Schichtpressstoffe für die Anwendung im Freien mit einer Dicke von 2 mm und größer

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

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 438-6:2016) 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 438-6:2005.

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*

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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard applies to Exterior-grade Compact laminates of thickness 2 mm and greater produced by using a high pressure process. It specifies requirements for standard and flame-retardant laminates intended for use under outdoor weather conditions such as direct sunlight rain and frost. Two levels of performance are specified; one for moderate exterior conditions, and the other for severe exterior conditions.

Laminates complying with this European Standard are referred to as Exterior-grade Compact laminates, and are characterized by their high tensile strength, high impact resistance, thermal shock resistance, and resistance to weather and corrosion. They are available in a variety of decorative colours, with high resistance to colour change and aging in outdoor applications. When they are self-supporting Exterior-grade Compact laminates are ready for installation, and only require cutting to size, drilling, etc. to suit the application. EN 438-2 specifies the methods of test relevant to this part of EN 438.

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 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 pyknometer 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.