SLOVENSKI STANDARD
oSIST prEN 17104:2017

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Plastomerne toge zaščitne stenske obloge za notranjo uporabo v stavbah - Tehnične lastnosti

Thermoplastics rigid protective wallcovering panels for internal use in buildings - Performance characteristics

Kunststoff-Wandschutzplatten für die Anwendung in Gebäuden - Leistungskenngrößen

Panneaux de protection murale rigides en thermoplastiques pour usage intérieur dans le bâtiment - Caractéristiques de performance

Ta slovenski standard je istoveten z: **prEN 17104**

ICS:

83.140.10	Filmi in folije	Films and sheets
91.180	Notranja zaključna dela	Interior finishing

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Thermoplastics rigid protective wallcovering panels for internal use in buildings - Performance characteristics

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 249.

If this draft becomes a European Standard, 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.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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European foreword

This document (prEN 17104:2017) has been prepared by Technical Committee CEN/TC 249 “Plastics”, the secretariat of which is held by NBN.

This document is currently submitted to the CEN Enquiry.

This document has been prepared under a Mandate (i.e. M/121) given to CEN by the European Commission and the European Free Trade Association and supports basic requirements for construction works of Regulation (EU) No. 305/2011.

For relationship with this Regulation, see informative Annex ZA, which is an integral part of this document.

Introduction

An overview of European standards for products used as wall finishes is given in Table 1.

Table 1 — European standards for products used as wall finishes

EN 438–7 High-pressure decorative laminates (HPL) — Sheets based on thermosetting resins (Usually called Laminates) — Part 7: Compact laminate and HPL composite panels for internal and external wall and ceiling finishes (CEN/TC 249)	EN 13245–2 Plastics — Unplasticized poly(vinyl chloride) (PVC-U) profiles for building applications — Part 2: PVC-U profiles and PVC-UE profiles for internal and external wall and ceiling finishes (CEN/TC 249)	EN 15534–5 Composites made from cellulose-based materials and thermoplastics (usually called wood-polymer composites (WPC) or natural fibre composites (NFC)) — Part 5: Specifications for cladding profiles and tiles (CEN/TC 249)	**prEN 17104** **Thermoplastics rigid protective wallcovering panels for internal use in buildings — Performance characteristics (CEN/TC 249)** **(This document)**
EN 1013 Light transmitting single skin profiled plastics sheets for internal and external roofs, walls and ceilings — Requirements and test methods (CEN/TC 128)	EN 16153 Light transmitting flat multiwall polycarbonate (PC) sheets for internal and external use in roofs, walls and ceilings — Requirements and test methods (CEN/TC 128)	EN 16240 Light transmitting flat solid polycarbonate (PC) sheets for internal and external use in roofs, walls and ceilings — Requirements and test methods (CEN/TC 128)	EN 15102 Decorative wall coverings — Roll and panel form (CEN/TC 99)
EN 14782 Self-supporting metal sheet for roofing, external cladding and internal lining — Product specification and requirements (CEN/TC 128)	EN 13986 Wood-based panels for use in construction — Characteristics, evaluation of conformity and marking (CEN/TC 112)	EN 14915 Solid wood panelling and cladding — Characteristics, evaluation of conformity and marking (CEN/TC 175)	EN 15286 Agglomerated stone — Slabs and tiles for wall finishes (internal and external) (CEN/TC 246)

1 Scope

This draft European Standard specifies product characteristics for thermoplastics rigid protective wallcovering panels whose purposes are decorative and protective, but non-structural.

The products covered by this draft European Standard are intended to be used as finishes for hanging onto internal walls and wall partitions by means of adhesive.

For the specified characteristics of these products, this draft European Standard provides for each of it corresponding: requirement(s), assessment method(s) (i.e. test, calculation or description), and way(s) of declaring its performance.

It also specifies the methods for the assessment and verification of constancy of performance of the products. In addition, for the concerned products, it specifies also marking.

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 71-3:1994, *Safety of toys — Part 3: Migration of certain elements*

EN 717-1, *Wood-based panels — Determination of formaldehyde release — Part 1: Formaldehyde emission by the chamber method*

EN 1122, *Plastics — Determination of cadmium — Wet decomposition method*

EN 12149:1997, *Wallcoverings in roll form — Determination of migration of heavy metals and certain other elements, of vinyl chloride monomer and of formaldehyde release*

EN 12667, *Thermal performance of building materials and products — Determination of thermal resistance by means of guarded hot plate and heat flow meter methods — Products of high and medium thermal resistance*

EN 13238, *Reaction to fire tests for building products — Conditioning procedures and general rules for selection of substrates*

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

EN 13823, *Reaction to fire tests for building products — Building products excluding floorings exposed to the thermal attack by a single burning item*

EN ISO 354, *Acoustics — Measurement of sound absorption in a reverberation room (ISO 354)*

EN ISO 6401, *Plastics — Poly(vinyl chloride) — Determination of residual vinyl chloride monomer — Gas-chromatographic method (ISO 6401)*

EN ISO 6603-1, *Plastics — Determination of puncture impact behaviour of rigid plastics — Part 1: Non-instrumented impact testing (ISO 6603-1)*

EN ISO 10456, *Building materials and products — Hygrothermal properties —Tabulated design values and procedures for determining declared and design thermal values (ISO 10456)*

EN ISO 11654, *Acoustics — Sound absorbers for use in buildings — Rating of sound absorption (ISO 11654)*

EN ISO 11925-2, *Reaction to fire tests — Ignitability of products subjected to direct impingement of flame — Part 2: Single-flame source test (ISO 11925-2)*

EN ISO 12460-3, *Wood-based panels — Determination of formaldehyde release — Part 3: Gas analysis method (ISO 12460-3)*

ISO 22262-2, *Air quality — Bulk materials — Part 2: Quantitative determination of asbestos by gravimetric and microscopical methods*

3 Terms and definitions

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

3.1
thermoplastic rigid protective wallcovering panel
homogeneous or heterogeneous panel/sheet made from plastic material(s), covered or not with a decorative film, intended to wall protection without structural function

Note 1 to entry: On the market, the wording “thermoplastic rigid protective wallcovering sheet” is also used.

Note 2 to entry: Panels/sheets can have different shapes, dimensions, thicknesses, colours, designs or densities, and the protective face of panels can be with or without embossing.

3.2
product family
range of products within defined limits of variability defined by the manufacturer or by a technical specification of the product parameters and, if relevant, end-use parameters for which essential characteristics remain unchanged

4 Product characteristics

4.1 Reaction to fire

If the manufacturer is required to make a declaration of the reaction to fire performance (i.e. if the thermoplastics rigid protective wallcovering panel is subject to regulations), the thermoplastics rigid protective wallcovering panel shall be classified in accordance with the classification criteria of EN 13501-1 when tested according to 5.1.

4.2 Emission (release) of formaldehyde

Where formaldehyde-containing materials, have been added to the product as a part of the production process, the product shall be tested according to 5.2 and classified into one of two classes: E1 or E2.

The test requirements for both initial type testing and factory production control/continuous surveillance are laid down in Table 2.

The limit values for the formaldehyde classes E1 and E2 are given in Table 2.

Table 2 — Release of formaldehyde limit values

	Requirement	
Test method	EN 717–1	EN ISO 12460-3
Class E1	≤ 0,124 mg/m³ air	≤ 3,5 mg/m² h
Class E2	> 0,124 mg/m³ air	> 3,5 to ≤ 8,0 mg/m² h

If formaldehyde is not used in the manufacturing process of the thermoplastics rigid protective wallcovering panel or any of its raw material and is not known to occur in any stage of production process, for which documentation is provided, then the panel does not need to be tested and may be declared as E1.

NOTE The emission of very volatile organic compound (VVOC), as formaldehyde (CAS 50–00–0), will be determined according to CEN/TS 16516 when the corresponding classification will be available.

4.3 Release of asbestos

The thermoplastics rigid protective wallcovering panels shall be tested according to 5.3.

The contents of the following substances shall be determined: actinolite, amosite, anthophyllite, chrysotile, crocidolite and tremolite.

If these substances are not used in the manufacturing process of the thermoplastics rigid protective wallcovering panel or any of its raw material and are not known to occur in any stage of production process, then the panel does not need to be tested.

4.4 Release of other dangerous substances

National regulations on dangerous substances, other than those already covered in other clauses of this standard, may require verification and declaration on release, and sometimes content, when construction products covered by this standard are place on those markets. In the absence of European harmonized test methods, verification and declaration on release/content should be done taking into account national provisions in the place of use.

NOTE An informative database covering European and national provisions on dangerous substances is available at the Construction website on EUROPA accessed through:

http://ec.europa.eu/growth/tools-databases/cp-ds/index_en.htm

4.5 Metals for which content restrictions apply to construction products used in interiors

The thermoplastics rigid protective wallcovering panels shall be tested according to 5.4.

The contents of the following substances shall be determined:

— Cadmium (Cd) (CAS 7440-43-9) and its compounds;

— Lead (Pb) (CAS 7439-92-1) and its compounds.

If these substances are not used in the manufacturing process of the thermoplastics rigid protective wallcovering panel or any of its raw material and are not known to occur in any stage of production process, then the panel does not need to be tested.

4.6 Heavy metals

4.6.1 Requirements

The migration of heavy metals from the thermoplastics rigid protective wallcovering panel, expressed in mg/kg of thermoplastics rigid protective wallcovering panel, shall not exceed the values given in Table 3 when measured in accordance with 5.5.

If these substances are not used in the manufacturing process of the thermoplastics rigid protective wallcovering panel or any of its raw material and if the raw materials are declared by the supplier to satisfy the requirements of Table 3, then the panel does not need to be tested.

Table 3 — Maximum migration of heavy metals

Heavy metal	Symbol	Maximum migration mg/kg
Antimony	Sb	Declared value
Barium	Ba	500
Selenium	Se	165

4.6.2 Interpretation of results

The analytical results on migration of heavy metals and other elements from the thermoplastics rigid protective wallcovering panel, obtained from the tests specified in 5.5 shall be corrected by subtracting the value of the analytical correction factors given in Table 4 in order to obtain a corrected analytical result.

Table 4 — Analytical correction factor

Element	Sb	Ba	Se
Analytical correction factor (as a percentage)	60	30	60

The thermoplastics rigid protective wallcovering panel shall be considered as satisfying the requirements of this European Standard if the corrected analytical result is equal to or less than the limits indicated in Table 3.

Given the precision of the methods specified in 5.5, the corrected analytical results shall be used to take into account the results of inter-laboratory tests (see EN 71-3:1994, Annex D).

4.7 Vinyl chloride monomer

The maximum content of vinyl chloride monomer (VCM) of the thermoplastics rigid protective wallcovering panel shall be less than or equal to 0,1 % (w/w) when measured in accordance with 5.6.

If vinyl chloride or the products containing vinyl chloride are not added during manufacture and if the raw materials are declared by the supplier as containing less than 1 mg/kg of vinyl chloride, the test is not necessary.

4.8 Impact resistance

The impact resistance of the thermoplastics rigid protective wallcovering panels shall be evaluated.

The thermoplastics rigid protective wallcovering panels shall be tested according to 5.7.