
Toge podložne folije za strehe - Definicije in lastnosti

Rigid underlays for discontinuous roofing - Definitions and characteristics

Unterdeckplatten für Dachdeckungen - Definitionen und Eigenschaften

Ecrans rigides de sous-toiture pour pose en discontinu - Définitions et caractéristiques

Ta slovenski standard je istoveten z: EN 14964:2006

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English Version

Rigid underlays for discontinuous roofing - Definitions and characteristics

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Définitions et caractéristiques

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Eigenschaften

This European Standard was approved by CEN on 28 August 2006.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 14964:2006) has been prepared by Technical Committee CEN/TC 128 “Roof covering products for discontinuous laying and products for wall cladding”, the secretariat of which is held by IBN/BIN.

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of an identical text or by endorsement, at the latest by April 2007, and conflicting national standards shall be withdrawn at the latest by July 2008.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

This European Standard is a product specification for rigid underlays of the type defined in Clause 3 of this European Standard and commonly used in a number of applications for roofing used in buildings.

Underlays of the type specified in this European Standard are deemed to be construction products in accordance with Article 1 of the Construction Products Directive (CPD).

The general test methods referred to in this product specification fall within the scope of CEN/TC 128 unless otherwise stated in this European Standard.

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

Introduction

Article 2 of the CPD requires that construction products be fit for intended use, that is to say that the products shall have the characteristics enabling the works incorporating such products to satisfy the Essential Requirements referred to in Article 3 of the CPD.

The harmonized characteristics specified by this European Standard are derived from Mandate M/122 “*Roof coverings, rooflights, roof windows and ancillary products*”. It contains also voluntary characteristics. Annex ZA indicates which characteristics of this European Standard are harmonized.

The test methods referred to in this European Standard relate to the use of rigid underlays in roofing.

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1 Scope

This European Standard specifies the technical requirements for factory made flat or profiled sheets (wood-based, fibre cement flat sheets or corrugated bituminous sheets or other materials which can be characterised as one of these materials) that are used as underlays in pitched roof constructions with discontinuously laid coverings (e.g. tiles, slates). This European Standard also establishes methods of inspection and testing as well as criteria for evaluation of conformity.

This European Standard does not include rigid underlays which have a stiffening function or a load bearing function.

2 Normative references

The following referenced documents are indispensable for the application 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 300, *Oriented Strand Boards (OSB) — Definitions, classification and specifications*

EN 312, *Particleboards — Specifications*

EN 324-1, *Wood-based panels — Determination of dimensions of boards — Part 1: Determination of thickness, width and length*

EN 324-2, *Wood-based panels — Determination of dimensions of boards — Part 2: Determination of squareness and edge straightness*

EN 534:2006 *Corrugated bitumen sheets — Product specification and test methods*

EN 622-2, *Fibreboards — Specifications — Part 2: Requirements for hardboards*

EN 622-3, *Fibreboards — Specifications — Part 3: Requirements for medium boards*

EN 622-4, *Fibreboards — Specifications — Part 4: Requirements for softboards*

EN 622-5, *Fibreboards — Specifications — Part 5: Requirements for dry process boards (MDF)*

EN 636, *Plywood — Specifications*

EN 12467:2004, *Fibre cement flat sheets — Product specifications and test methods*

EN 12524:2000, *Building materials and products — Hygrothermal properties — Tabulated design values*

EN 12664, *Thermal performance of building materials and products — Determination of thermal resistance by means of guarded hot plate and heat flow meter methods — Dry and moist products of medium and low thermal resistance*

EN 13501-1:2002, *Fire classification of construction products and building elements — Part 1: Classification using test data from reaction to fire tests*

EN 13986:2004, *Wood-based panels for use in construction — Characteristics, evaluation of conformity and marking*

EN 14279, *Laminated Veneer Lumber (LVL) — Definitions, classification and specifications*

EN ISO 140-3, *Acoustics — Measurement of sound insulation in buildings and of building elements — Part 3: Laboratory measurements of airborne sound insulation of building elements (ISO 140-3:1995)*

EN ISO 717-1, *Acoustics — Rating of sound insulation in buildings and of building elements — Part 1: Airborne sound insulation (ISO 717-1:1996)*

EN ISO 12572, *Hygrothermal performance of building materials and products — Determination of water vapour transmission properties (ISO 12572:2001)*

3 Terms and definitions

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

3.1 rigid underlay
factory made flat or profiled sheets: wood-based panels, fibre cement sheets, corrugated bitumen sheets or sheets of other materials.

NOTE They are used as underlay to coverings of pitched roofs (e.g. tiles, slates). They can be laid overlapping, one sheet covering the other (OL) or interlocking, sheets side by side (IL)

3.1.1 wood-based panel
solid wood panel, laminated veneer lumber (LVL), plywood, oriented strand board (OSB), resin-bonded particleboard, cement-bonded particleboard, fibreboard or wood fibre insulation board

3.1.2 fibre cement flat sheet
sheets consisting essentially of cement or a calcium silicate formed by a chemical reaction of a siliceous and a calcareous material, reinforced by organic and/or inorganic fibres.

NOTE Fibre cement sheets can be pressed or un-pressed

3.1.3 corrugated bitumen sheet
profiled sheet consisting of an intimate and homogeneous mixture of organic and/or inorganic fibres and bitumen.

NOTE The surface may be natural coloured, spun-dyed, coated, granulised or mineralised

3.2 sampling
procedure used to draw or constitute a sample

3.3 sample
sheet from which a test piece is taken

3.3.1 test piece
part of the sample from which test specimens are taken

3.3.2 test specimen
piece of accurate dimensions taken from the test piece

3.4**manufacturer's declared value (MDV)**

value declared by the manufacturer accompanied by a declared tolerance

4 Product characteristics and test methods**4.1 General**

Rigid underlays based on wood, fibre cement or made of corrugated bitumen sheets have to meet the requirements as given in 4.3 and shall be tested accordingly. Rigid underlays made of other materials shall be grouped into one of the different materials (wood-based, fibre cement, corrugated bitumen sheets) and all tests shall be carried out according to the respective material group.

Factory production control and verification of manufacturer's stated values shall be carried out in accordance with Annex A.

4.2 Dimensions and tolerances (dimensional variation)

The tolerances on dimensions of the products described in this European Standard are to be classified as follows:

- Type OL: rigid underlays laid overlapping;
- Type IL: rigid underlays laid interlocking.

The tolerances for wood-based panels, fibre cement flat sheets and the corrugated bitumen sheets for type OL shall comply with the relevant applicable product standards as listed in Clause 2. Dimensions and tolerances of wood-based panels shall be determined in accordance with EN 324-1 and EN 324-2.

Dimensions and tolerances of fibre cement flat sheets shall be determined in accordance with EN 12467.

Dimensions and tolerances of corrugated bitumen sheets shall be determined in accordance with EN 534.

If a product is not based on one of these materials, the tolerances for type OL are given in Table 1.

For all products type IL the values of tolerances are given in Table 2.

Table 1 — Type OL: Tolerances for rigid underlays laid overlapping

Characteristic		Tolerance
Length		± 5 mm
Width		± 1 %
Straightness or squareness ^a		Deviation: 4 mm/m length
Thickness	Flat products	± 1 mm
	Corrugated products	± 10 %
Height of corrugations		± 1 %
Pitch of corrugations		± 1 %
^a Either one may be declared.		

Table 2 — Type IL: Tolerances for rigid underlays laid interlocking

Characteristic	Tolerance
Length	± 5 mm
Width	± 3 mm, max 1/3 of interlocking
Thickness	+ 3 mm / -1 mm
Squareness	2 mm/m
Straightness	1,5 mm/m, max. 1/3 of interlocking

4.3 Application-related characteristics

4.3.1 Mechanical resistance

4.3.1.1 General

The mechanical resistance of products used as rigid underlays (under the scope of this European Standard) is characterized through bending strength.

4.3.1.2 Corrugated bitumen sheets

The bending under downward load shall be determined in accordance with EN 534:2006, 7.2.1, with the following modifications:

- the distance between the tubes (Figure 8/key 2) shall be 400 mm instead of 620 mm;
- the distance between the three supports (Figure 8/key 5) shall be modified in the proportion of 400/620: e.g. 210 mm instead of 325 mm, 200 mm instead of 310 mm;

- instead of square tube (Figure 8/key 2), rectangular tubes of 100 mm width and 40 mm height shall be used;
- the minimum load for a deflection of 1/200 of a span of 400 mm shall be 500 N/m².

4.3.1.3 Fibre cement products

The bending strength shall be determined in accordance with EN 12467. The product shall comply with at least category D as given in EN 12467:2004. Un-pressed sheets have to fulfil at least class 3, pressed sheets at least class 4 according to EN 12467:2004.

4.3.1.4 Wood based panels

The bending strength for wood based panels (required to be at least suitable for general purpose uses in humid conditions) shall be at least the limit value for the following boards:

- HB.H according to EN 622-2;
- MBL.H according to EN 622-3;
- MBH.H according to EN 622-3;
- SB.H according to EN 622-4;
- MDF.RWH according to EN 622-5;
- Laminated veneer lumber LVL/2 according to EN 14279;
- OSB/3 and OSB/4 according to EN 300;
- Particleboard P5 according to EN 312;
- Plywood C2 according to EN 636.

4.3.1.5 Other materials

The mechanical resistance of products for use as rigid underlays shall be determined in accordance with the product standards of corrugated bitumen sheets, fibre cement sheets or wood based panels and all tests shall be carried out according to the respective material group.

4.3.2 Reaction to fire

Reaction to fire shall be determined when subject to regulatory requirements, and may be determined when not subject to such requirements.

Except for wood-based panels, where the manufacturer wishes to declare reaction to fire performance (e.g. where the product is subject to regulatory requirements), the product shall be tested and classified in accordance with EN 13501-1:2002, Table 1.

For wood-based panels, the reaction to fire performance shall be tested and classified according to EN 13501-1:2002, Table 1 or taken from EN 13986:2004, Table 8 (CWFT).

Where the test method requires it, products shall be mounted and fixed in a manner representative of their intended end use conditions.