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Hidroizolacijski trakovi - Polimerni in elastomerni trakovi za tesnjenje - Definicije in lastnosti

Flexible sheets for waterproofing - Plastic and rubber damp proof courses - Definitions and characteristics

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Abdichtungsbahnen - Kunststoff- und Elastomer-Mauersperrbahnen - Definitionen und Eigenschaften

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Feuilles souples d'étanchéité Barrières d'étanchéité plastiques et élastomères contre les remontées capillaries dans les murs - Définitions et caractéristiques

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EUROPEAN STANDARD

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Flexible sheets for waterproofing - Plastic and rubber damp proof courses - Definitions and characteristics

Feuilles souples d'étanchéité - Barrières d'étanchéité plastiques et élastomères contre les remontées capillaires dans les murs - Définitions et caractéristiques

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This European Standard was approved by CEN on 30 March 2012.

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

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Foreword

This document (EN 14909:2012) has been prepared by Technical Committee CEN/TC 254 "Flexible sheets for waterproofing", the secretariat of which is held by NEN.

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of an identical text or by endorsement, at the latest by November 2012, and conflicting national standards shall be withdrawn at the latest by November 2012.

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 14909:2006.

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.

The main technical changes are:

- the resistance to low temperature is only tested with the upper side in tension;
- the minimum tolerance for the water vapour transmission is fixed;
- the rules for mounting and fixing for reaction of fire testing are improved and the variation of products where a result apply are fixed;

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- for FPC the indirect testing as in other TC 254 standards is introduced.

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, 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.

Introduction

The purpose of damp proof courses is to prevent water rising up a wall from the ground, water moving from one part of a wall to another and to deflect water from an inner wall of a cavity wall construction to the exterior of the building. Damp proof courses may also be used in masonry chimneys and parapet walls to protect the inside of the building from water moving down from above.

They should be designed in conjunction with flashings and sheets for waterproofing, including roofing sheets and damp proof sheets, to ensure a continuous barrier and should deflect water to the exterior of a building so that it can drain away safely.

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1 Scope

This European Standard specifies the characteristics of flexible sheets of plastics and rubber intended for use as damp proof courses for buildings. It specifies the requirements and test methods and provides for the evaluation of conformity of the products with the requirements of this European Standard.

This European Standard does not cover related products such as preformed cavity trays, coping and flashings.

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 495-5, Flexible sheets for waterproofing — Determination of foldability at low temperature — Part 5: Plastic and rubber sheets for roof waterproofing

EN 1296, Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roofing — Method of artificial ageing by long term exposure to elevated temperature

EN 1847, Flexible sheets for waterproofing — Plastics and rubber sheets for roof waterproofing — Methods for exposure to liquid chemicals, including water

EN 1848-2, Flexible sheets for waterproofing — Determination of length, width, straightness and flatness — Part 2: Plastic and rubber sheets for roof waterproofing rds.iteh.ai)

EN 1849-2, Flexible sheets for waterproofing — Determination of thickness and mass per unit area — Part 2: Plastic and rubber sheets

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EN 1850-2, Flexible sheets for waterproofing — Determination of visible defects — Part 2: Plastic and rubber sheets for roof waterproofing

EN 1928:2000, Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of watertightness

EN 1931, Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of water vapour transmission properties

EN 12310-1, Flexible sheets for waterproofing — Part 1: Bitumen sheets for waterproofing — Determination of resistance to tearing (nail shank)

EN 12317-2, Flexible sheets for waterproofing — Determination of shear resistance of joints — Part 2: Plastic and rubber sheets for roof waterproofing

EN 12691, Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of resistance to impact

EN 12730, Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of resistance to static loading

EN 13416:2001, Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Rules for sampling

EN 13501-1:2007+A1:2009, Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests

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)

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13416:2001 and the following apply.

3.1

waterproofing

action to prevent the passage of water from one plane to another

3.2

plastics and rubber damp proof course

flexible sheets of plastics or rubbers or composites based on these materials whose function is to prevent liquid water passing from one part of the wall to another (see Introduction)

3.3

ventilating or draining damp proof course

flexible sheets conforming to the definition in 3.2 but with the ability to provide a continuous void or structure to allow free movement of water vapour or liquid water between the underside of the damp proof course and any further construction

3.4

manufacturer's limiting value MLV

value that is stated by the manufacturer to be met during testing and that can be a minimum or a maximum value according to statements made under product characteristics of this standard

3.5

manufacturer's declared value MDV SIST EN 14909:2012

value declared by the manufacturer accompanied by la declared tolerance b6-a2e8-

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3.6

plastic or rubber sheet

factory-made flexible membrane made from a plastic or rubber which may include composites with other materials

3.7

sampling

procedure used to select or constitute a sample

3.8

sample

sheet from which a test piece is taken

3.9

test piece

part of the sample from which test specimens are taken

3 10

test specimen

piece of precise dimensions taken from the test piece

3.11

batch

amount of product continuously manufactured to the same specification

4 Product designation

The types of damp proof sheets covered by this European Standard are designated as follows:

- TYPE A damp proof course;
- TYPE V damp proof course ventilating or draining.

5 Product characteristics

5.1 General

- **5.1.1** Where a tolerance is limited by this European Standard it does not have to be declared by the manufacturer.
- **5.1.2** When tested for purposes other than initial type testing or factory production control, the tests to determine product characteristics indicated in this standard shall be started within one month of delivery of the product from the manufacturer.

5.2 Deviation from test sample dimensions

Where the contours of the product make it impossible to obtain a test sample of the required dimensions, or otherwise render the test impracticable, testing may be carried out either on samples of different dimensions or if still impracticable on the equivalent flat sheet of the same thickness as the finished product. Any such deviations from the test method shall be recorded on the test report and the product data sheet.

5.3 Visible defects

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The product shall be free of visible detects determined in accordance with EN 1850-2.2e8-004ee4d40a40/sist-en-14909-2012

5.4 Dimensions and tolerances

The length, width and straightness shall be determined in accordance with EN 1848-2. The length and width shall lie within the declared tolerance of the manufacturer's declared value. The maximum deviation from straightness shall not exceed 75 mm per 10 m length or in proportion for other lengths (e.g. 37,5 mm per 5 m length).

5.5 Thickness and mass per unit area

The thickness and mass per unit area shall be determined in accordance with EN 1849-2.

Where a product is specified by mass per unit area, the mass shall lie within the declared tolerance of the manufacturer's declared value. Where it is not practicable to obtain a sample (see 5.2), a larger sample area shall be used and the deviation from the test method noted.

Where a product is specified by thickness, the thickness shall lie within the declared tolerance of the manufacturer's declared value. No single measurement shall lie outside the declared tolerance of the manufacturer's declared value.

5.6 Watertightness

The product shall be watertight as determined by EN 1928:2000 Method A with a pressure of 2 kPa and shall give a pass result.

5.7 Resistance to impact

Where required resistance to impact shall be determined in accordance with EN 12691 and shall be greater than or equal to the manufacturer's limiting value.

5.8 Durability

5.8.1 Against ageing/degradation

In order to verify the artificial ageing behaviour of the product, watertightness shall be determined after exposure in accordance with EN 1296 for a period of 12 weeks. The watertightness shall be determined in accordance with EN 1928:2000 Method A at a pressure of 2 kPa and shall give a pass result.

5.8.2 Against alkali

Where required in order to verify the durability of the products the sheet shall be tested before and after exposure to chemicals in accordance with EN 1847. The sheet shall be watertight as determined in accordance with EN 1928:2000 Method A or B, with a pressure of 2 kPa pressure before and after long term exposure to alkali in accordance with EN 1847 (milk of lime), 28 days, 23°C.

5.9 Resistance to low temperature

Where required folding at low temperature shall be determined in accordance with EN 495-5 and shall be less than or equal to the manufacturer's limiting value. If the manufacturer defines a top side only the top surface (the upper side of the sheet as used in-situ) shall be tested.

5.10 Resistance to tearing (nail shank) (standards.iteh.ai)

Where required, the tear resistance (nail shank) shall be determined in accordance with EN 12310-1 and shall lie within the declared tolerance of the manufacturer's declared value. Control of the manufacturer's declared value.

5.11 Joint strength

Where required joint strength shall be determined in accordance with EN 12317-2 and shall be greater than or equal to the manufacturer's limiting value.

5.12 Water vapour transmission properties

Where required, the moisture resistance factor μ of plastic and rubber sheets may be determined in accordance with EN 1931 and the result shall lie within the declared tolerance of the MDV. The tolerance of the MDV shall lie in \pm 30 %.

5.13 Resistance to static loading

The resistance to static loading shall be determined in accordance with EN 12730 and the results of the test shall be greater than or equal to the manufacturer's limiting value.

5.14 Resistance to deformation under load for type V

The resistance of type V damp proof courses to deformation under load shall be determined in accordance with Annex B and the results shall be less than or equal to the manufacturer's limiting value of deformation at the defined load and the defined time.

5.15 Reaction to fire

Where required, the product shall be tested and classified in accordance with EN 13501-1:2007+A1:2009, Table 1. According to EN ISO 11925-2, the test is required to be undertaken on the exposed surface of the delivered flexible sheet membrane (surface exposure) free hanging without any substrate in one direction only, and the reinforcement has to be stated by the manufacturer as "organic" or "inorganic".

- a) Test results from EN ISO 11925-2 for a given product shall apply to all colors (including black, white).
- b) Test results from EN ISO 11925-2 for a given product without an inner layer (homogenous) shall apply to a comparable product with an additional organic inner layer (lower than 150g/m²) or any additional inorganic layer.
- c) Test results from EN ISO 11925-2 for a product with a thickness of above 1 mm shall apply to any comparable product with a higher thickness up to a limit of 3 mm respectively
- d) Test results from EN ISO 11925-2 for a given product with a backing shall apply to a comparable product with a backing of the same type of lower mass per unit area or no backing.

NOTE It is currently considered that the Euroclasses Classification system at Classes D and above requires investigation to determine its appropriateness to the products covered by this European Standard (the SBI test may be inappropriate for products covered by the standard). Pending results of such an investigation and discussions in the Fire Regulators Group, products covered by this European Standard are tested to EN ISO 11925-2.

If and when a new fire test scenario and test method are developed for the products, this European Standard will be amended to refer to them.

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5.16 Dangerous substances

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NOTE For products placed on the market within the European Economic Area, see ZA.1.

Materials used in products shall not release any dangerous substances in excess of the maximum permitted levels specified in a relevant European Standard for the material or permitted in the national regulations of the member state of destination.

6 Evaluation of conformity

6.1 General

The compliance of the product with the requirements of this European Standard and with the stated values (including classes) shall be demonstrated by:

- initial type testing,
- factory production control by the manufacturer, including product assessment.

For the purposes of testing, products may be grouped into families, where it is considered that the results for a given characteristic from any one product within the family are representative for all other products within that family.

6.2 Initial type testing

6.2.1 General

Initial type testing shall be performed to show conformity with this European Standard. Tests previously performed in accordance with the provisions of this European Standard (same product, same characteristic(s),