



SLOVENSKI STANDARD
SIST EN 1849-1:2000

01-junij-2000

**Hidroizolacijski trakovi - Določevanje debeline in mase na enoto površine - 1. del:
Bitumenski trakovi za tesnjenje streh**

Flexible sheets for waterproofing - Determination of thickness and mass per unit area -
Part 1: Bitumen sheets for roof waterproofing

Abdichtungsbahnen - Bestimmung der Dicke und der flächenbezogenen Masse - Teil 1:
Bitumenbahnen für Dachabdichtungen

Feuilles souples d'étanchéité - Détermination de l'épaisseur et de la masse surfacique -
Partie 1: Feuilles d'étanchéité de toiture bitumineuses

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Ta slovenski standard je istoveten z: EN 1849-1:1999

ICS:

91.060.20	Strehe	Roofs
91.100.50	Veziva. Tesnilni materiali	Binders. Sealing materials

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en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 1849-1

November 1999

ICS 91.100.50

English version

Flexible sheets for waterproofing - Determination of thickness
and mass per unit area - Part 1: Bitumen sheets for roof
waterproofing

Feuilles souples d'étanchéité - Détermination de l'épaisseur
et de la masse surfacique - Partie 1: Feuilles d'étanchéité
de toiture bitumineuses

Abdichtungsbahnen - Bestimmung der Dicke und der
flächenbezogenen Masse - Teil 1: Bitumenbahnen für
Dachabdichtungen

This European Standard was approved by CEN on 30 September 1999.

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.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 254 "Flexible sheets for waterproofing", the secretariat of which is held by BSI.

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 May 2000, and conflicting national standards shall be withdrawn at the latest by September 2001.

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

1 Scope

This European Standard specifies a method for the determination of thickness and mass per unit area of bitumen sheets for roof waterproofing. The measurement of thickness is appropriate for most bitumen sheets including sheets with a factory applied mineral finish

The determination of thickness is not applicable to sheets with pronounced surface texture or to sheets with a substantial fibrous backing. Where it is required to characterize these products, mass per unit area should be used instead.

The determination of mass per unit area serves to verify the value stated by the manufacturer for information and is not applicable to perforated materials.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

prEN 13416:–¹⁾

Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Rules for sampling

3 Definitions

For the purpose of this standard, the definitions indicated in 3.1 to 3.5 apply.

3.1 thickness: The dimension normal to the surface of the sheet.

3.2 pronounced surface texture: A textured pattern or emboss on one or both surfaces influencing the thickness by more than 10 %.

3.3 substantial fibrous backing: A layer of woven or non-woven fabric of synthetic fibres, weighing more than 80 g/m², fixed to the bottom of the sheet.

3.4 emboss: A textured pattern intentionally impressed into one or both surfaces of the sheet during the manufacturing process.

3.5 selvedge: An area of waterproofing sheet left free of granules or similar surface protection to aid the jointing of laps.

¹⁾ standard in preparation

4 Determination of thickness

4.1 Principle

The thickness of the sheet under test is measured by direct means in 10 places across the width of the sheet and the mean of these values recorded as the overall thickness in mm.

4.2 Apparatus

Measuring device, capable of measuring the thickness to the nearest 0,01 mm. The measuring surfaces shall be planar and have a diameter of 10 mm exerting a pressure of 20 kPa on the sheet surface.

4.3 Sampling and preparation of test specimens

4.3.1 Sampling

A complete undamaged roll of the bitumen sheet to be tested shall be selected in accordance with prEN 13416.

4.3.2 Preparation of test specimens

A test specimen at least 100 mm long and to the full width of the sheet shall be taken from the sample.

4.3.3 Conditioning of test specimens

Generally no ageing or conditioning shall be carried out and measurements shall be made under ambient conditions.

In case of dispute, the tests should be carried out at (23 ± 2) °C after conditioning for at least 20 h at (23 ± 2) °C.

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4.4 Procedure

Ensure that the sheet and the faces of the measuring device are free from contamination. Check the zero point of the measuring device before starting the measurements and recheck after each series of measurements.

When determining the thickness, lower the foot gently to avoid deforming the test specimen. Measure and record the thickness in 10 places evenly distributed across the width of the sheet. The outer measurements being made 100 mm in from each edge of the sheet.

4.5 Expression of results

4.5.1 Calculation

The thickness is calculated as the mean of the 10 individual recorded measurements carried out in accordance with 4.4, rounded and expressed to the nearest 0,1 mm.

4.5.2 Precision

The precision is not specified by this standard.

It is assumed that the measured thickness cannot be carried out to a precision greater than 0,1 mm.

5 Determination of mass per unit area

5.1 Principle

Test specimens are cut from the test piece and weighed in order to determine a mean value of mass per unit area.

5.2 Apparatus

Weighing device, capable of weighing a test specimen to the nearest 0,01 g.

5.3 Sampling and preparation of test specimens

5.3.1 Sampling

A complete undamaged roll of the bitumen sheet to be tested shall be selected in accordance with prEN 13416.

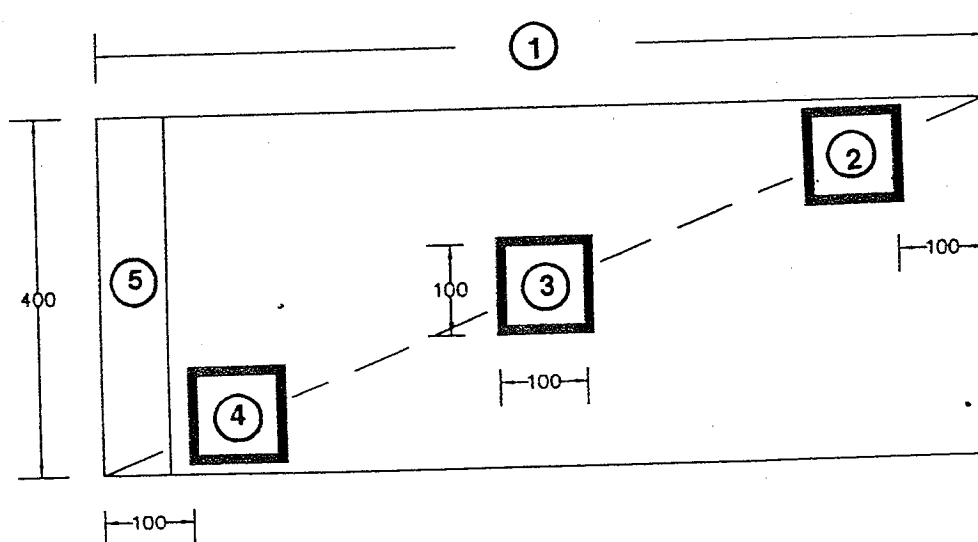
5.3.2 Preparation of test specimens

A test piece at least 0,4 m long and the full width of the sample shall be cut from the sample. Cut from this test piece three test specimens of square or circular form, each having an area of $100 \text{ mm}^2 \pm 1 \%$. One should be cut from the centre and the other two symmetrical with the first, along a line drawn diagonally between opposite corners of the test piece, in such a manner that their external edge is approximately 100 mm from the edge, taking care to avoid any selvage that may exist. (see figure 1).

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Dimensions in millimetres

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- 1 - product width
- 2, 3, 4 - test specimens
- 5 - selvage

Figure 1: Example showing square test specimens

5.3.3 Conditioning of test specimens

The test specimens shall be conditioned for at least 20 h at least (23 ± 2) °C and (50 ± 5) % relative humidity.

5.4 Procedure

Weigh each test specimen using the weighing device and record the weight to the nearest 0,1 g.

5.5 Expression of results

5.5.1 Calculation

Calculate the mass per unit area, m of the sheet, expressed in kg/m^2 , using the following equation:

$$m = \frac{m_1 + m_2 + m_3}{3} \cdot 10$$

where

- m_1 is the mass of the first test specimen, in g;
- m_2 is the mass of the second test specimen, in g;
- m_3 is the mass of the third test specimen in, g.

5.5.2 Precision

The precision is not specified by this standard.

It is assumed that the mass per unit area cannot be made to a precision of greater than 10 g/m^2 .

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6 Test report

The test report shall include at least the following information:

- a) all details necessary to identify the product tested;
- b) a reference to this European Standard (EN 1849-1) and any deviation from it;
- c) information on sampling and details on preparation of test specimens in accordance with 4.3 and 5.3;
- d) the test results in accordance with 4.5 and 5.5;
- e) dates of the test(s).