



SLOVENSKI STANDARD

SIST EN 12691:2001

01-december-2001

Hidroizolacijski trakovi - Bitumenski, polimerni in elastomerni trakovi za tesnjenje streh - Določevanje odpornosti proti udarcu

Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of resistance to impact

Abdichtungsbahnen - Bitumen-, Kunststoff- und Elastomerbahnen für Dachabdichtungen - Bestimmung des Widerstandes gegen stoßartige Belastung

Feuilles souples d'étanchéité - Feuilles d'étanchéité de toitures bitumineuses, plastiques et élastomères - Détermination de la résistance au choc

<https://standards.iteh.ai/catalog/standards/sist/4b5f7400-cdc4-4471-8693-83f9e0664dac/sist-en-12691-2001>

Ta slovenski standard je istoveten z: EN 12691:2001

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

EN 12691

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2001

ICS 91.100.50

English version

Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Determination of resistance to impact

Feuilles souples d'étanchéité - Feuilles d'étanchéité de toitures bitumineuses, plastiques et élastomères - Détermination de la résistance au choc

Abdichtungsbahnen - Bitumen-, Kunststoff- und Elastomerbahnen für Dachabdichtungen - Bestimmung des Widerstandes gegen stoßartige Belastung

This European Standard was approved by CEN on 10 June 2000.

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 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 Management Centre 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

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Contents

	Page
Foreword.....	3
Introduction	3
1 Scope	3
2 Normative references.....	3
3 Definitions.....	3
4 Principle.....	3
5 Apparatus	4
6 Sampling	9
7 Preparation of test specimens.....	9
8 Procedure	10
9 Expression of results	10
10 Test report.....	10

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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 July 2001, and conflicting national standards shall be withdrawn at the latest by July 2002.

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.

Introduction

This European Standard is intended for characterisation and classification of bitumen, plastic and rubber sheets as manufactured or supplied before use. This test method relates exclusively to products or to their components where appropriate, and not to waterproofing membrane systems composed of such products and installed in the works.

This test is intended to be used in conjunction with European Standard "Definitions and Characteristics" for bitumen, plastic and rubber sheets for roof waterproofing.

1 Scope

This European Standard specifies a test for puncture by impact on sheets for roof waterproofing. Mechanical stress on waterproofing sheets varies from static long-term loads to dynamic short-term loads. This method represents the dynamic category of load where puncture is caused by impact.

This European Standard may also be applied for other purposes of waterproofing.

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 any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest editions of the publication referred to apply.

prEN 13416:1998

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

3 Definition

For the purpose of this standard, the following definition applies.

3.1 top surface: The upper side of the sheet as used in situ. It is usually the inside of the roll.

4 Principle

The test specimen is struck on the top surface by a free-falling drop mass with a defined puncturing tool attached to the lower end. The puncturing tools are cylindrical with varying diameters, while the energy of the impact remains constant. The support is made of expanded polystyrene.

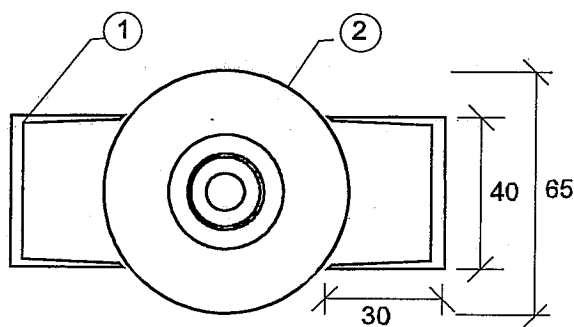
5 Apparatus

The testing is performed using a falling mass test apparatus, which consists of the parts indicated in 5.1 to 5.9.

5.1 Stand

Stand with guide rails for the falling drop mass. See example in Figure 1.

Dimensions in millimetres



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Key

- 1 Guide rail
- 2 Drop mass

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Figure 1 - Guide rails (example)

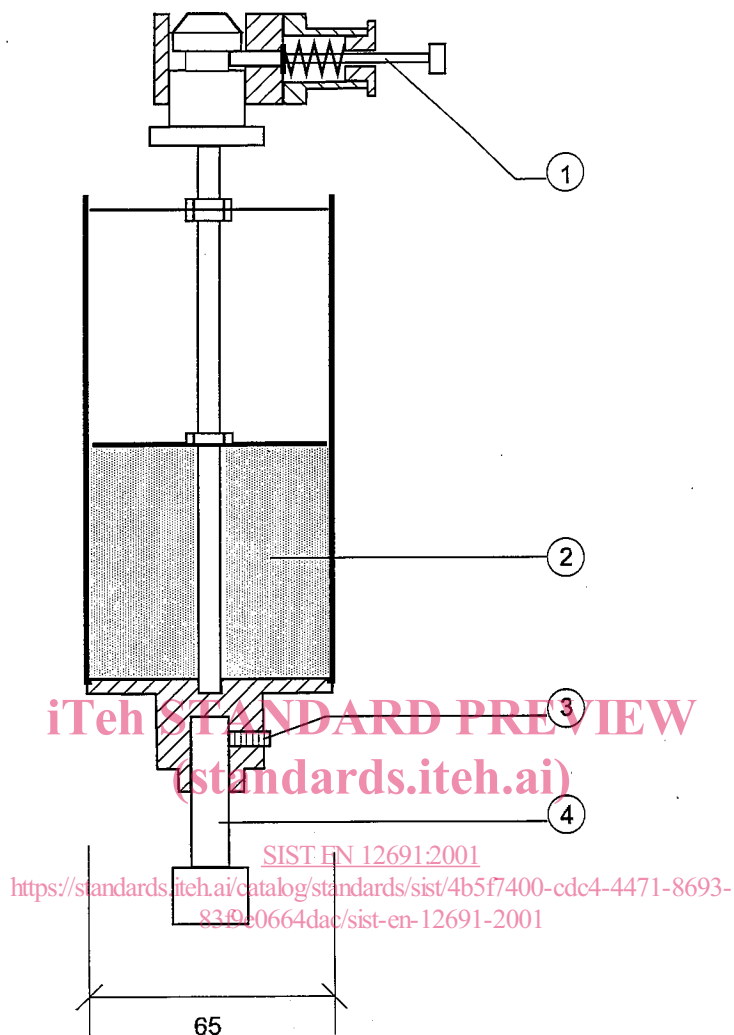
5.2 Drop mass

Drop mass capable of holding a puncturing tool. The drop mass including puncturing tool shall be (1000 ± 10) g. See example in Figure 2.

5.3 Release mechanism

Release mechanism with a setting device for drop height. The drop height measured from the bottom of the puncturing tool to the upper surface of the test specimen shall be (600 ± 5) mm. See example in Figure 2.

Dimensions in millimetres

**Key**

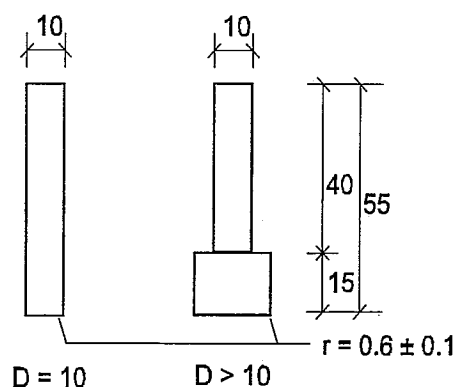
- 1 Release mechanism
- 2 Drop mass
- 3 Set screw
- 4 Puncturing tool

Figure 2 - Drop mass release (example)**5.4 Puncturing tools**

Puncturing tools shall be in the shape of cylindrical pistons (see Figure 3) and made according to the following specifications:

- a) formed in steel material;
- b) hardened to 50 HRC;
- c) shaft diameter of $(10 \pm 0,1)$ mm;
- d) cylinder diameter: 10 mm, 20 mm, 30 mm and 40 mm each with a tolerance of $\pm 0,1$ mm;
- e) cylinder edge radius of $(0,6 \pm 0,1)$ mm.

Dimensions in millimetres

**Key**

- D Cylinder diameter
r Radius of rounding off

Figure 3 - Puncturing tools**5.5 Ballast ring**

Ballast ring in steel with mass of (5000 ± 50) g and an inner diameter of (200 ± 2) mm according to Figure 4.

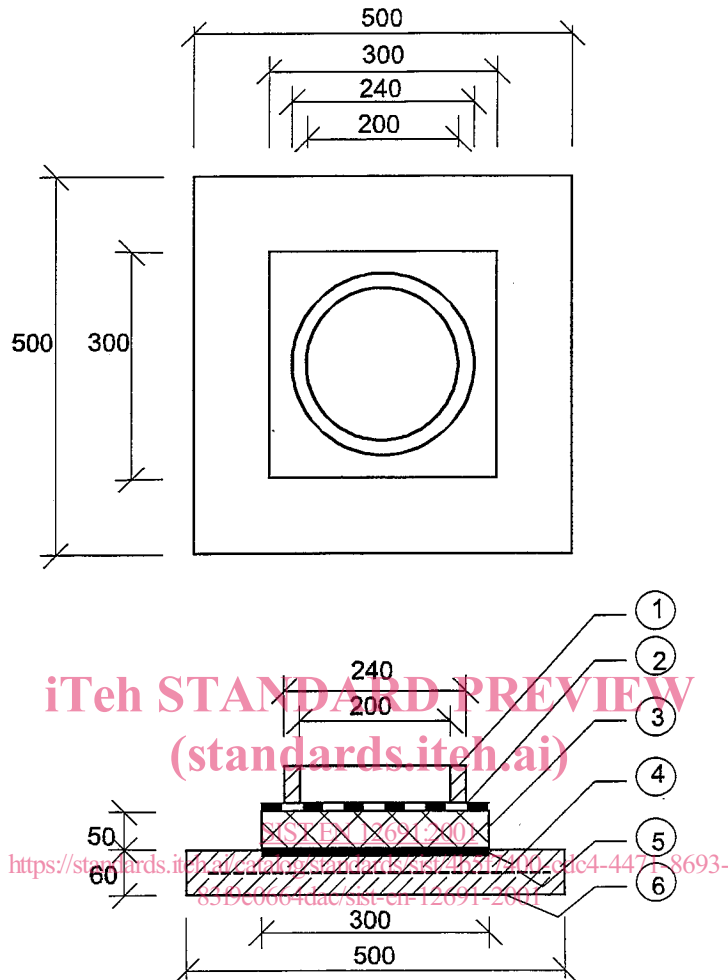
5.6 Standard expanded polystyrene panel

Standard expanded polystyrene panel with a cut surface, density of (20 ± 2) kg/m³ and size of about 300 mm x 300 mm x 50 mm.

5.7 Counter mass

Counter mass of about 500 mm x 500 mm x 60 mm concrete slab with an even and unmarked steel support plate of about 300 mm x 300 mm x 10 mm embedded in the surface; see Figure 4.

Dimensions in millimetres

**Key**

- 1 Ballast ring
- 2 Test specimen
- 3 Polystyrene
- 4 10 mm steel plate with even and unmarked surface
- 5 Ø5 mm steel mesh
- 6 Concrete countermass

Figure 4 - Countermass and ballast ring