



SLOVENSKI STANDARD
SIST EN 14692:2005

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Flexible sheets for waterproofing - Waterproofing of concrete bridge decks and other concrete surfaces trafficable by vehicles - Determination of the resistance to compaction of an asphalt layer **iTeh STANDARD PREVIEW**

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Abdichtungsbahnen - Abdichtungen für Betonbrücken und andere Verkehrsflächen auf Beton - Bestimmung des Widerstandes gegenüber Verdichtung der Schutzschicht

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Feuilles souples d'étanchéité - Étanchéité des ponts et autres surfaces en béton destinés à la circulation des véhicules - Détermination de la résistance au compactage de la couche de protection

Ta slovenski standard je istoveten z: EN 14692:2005

ICS:

91.100.50 Veziva. Tesnilni materiali Binders. Sealing materials

SIST EN 14692:2005

en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 14692

June 2005

ICS 91.100.50

English version

Flexible sheets for waterproofing - Waterproofing of concrete
bridge decks and other concrete surfaces trafficable by vehicles
- Determination of the resistance to compaction of an asphalt
layer

Feuilles souples d'étanchéité - Etanchéité de ponts et
autres surfaces en béton circulables par les véhicules -
Détermination de la résistance au compactage de la
couche bitumineuse

Abdichtungsbahnen - Abdichtungen für Betonbrücken und
andere Verkehrsflächen auf Beton - Bestimmung des
Widerstandes gegenüber Verdichtung der Schutzschicht

This European Standard was approved by CEN on 14 April 2005.

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.

[SIST EN 14692:2005](https://standards.iteh.ai/catalog/standards/sist/88aa6f72-50be-4c67-a9a9-84b1920c0c0a/en-14692-2005)

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Contents

Page

Foreword	3
Introduction	4
1 Scope.....	5
2 Normative references	5
3 Terms and definitions.....	5
4 Test methods	5
4.1 Principle	5
4.2 Apparatus and materials	6
4.3 Preparation of test specimens.....	6
4.4 Procedure	7
4.5 Expression of results.....	7
4.6 Test report	8
Annex A (normative) Determination of watertightness for Method 1	9

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Foreword

This document (EN 14692:2005) 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 December 2005, and conflicting national standards shall be withdrawn at the latest by December 2005.

This European Standard is one of a series of standards applicable to flexible sheets for waterproofing of concrete bridge decks and other concrete surfaces trafficable by vehicles.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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EN 14692:2005 (E)

Introduction

The purpose of the test is to determine the ability of a waterproofing system to resist damage from compaction of an asphalt layer.

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1 Scope

This European Standard specifies a test method for the evaluation of the resistance of a bitumen sheet to compaction of an asphalt layer.

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 1928, *Flexible sheets for waterproofing — Bitumen, plastic and rubber sheets for roof waterproofing — Determination of watertightness*

EN 13375:2004, *Flexible sheets for waterproofing — Waterproofing of concrete bridge decks and other concrete surfaces trafficable by vehicles — Specimen preparation*

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

prEN 14695:2003, *Flexible sheets for waterproofing — Reinforced bitumen sheets for waterproofing of concrete bridge decks and other concrete surfaces trafficable by vehicles — Definitions and characteristics*

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3 Terms and definitions

[SIST EN 14692:2005](https://standards.iteh.ai/catalog/standards/sist/88aa6f72-50be-4c67-a9a9-824b9242bc0c/sist-en-14692-2005)

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For the purposes of this document, the terms and definitions given in EN 13416:2001, EN 13375:2004 and prEN 14695:2003 apply.

4 Test methods

4.1 Principle

The test consists of compacting an asphalt layer of a determined composition on a bitumen sheet laid on a base specimen.

It may be carried out in two alternative ways:

- Method 1: The asphalt layer is laid directly on the sheet bonded to the base specimen;
- Method 2: A de-bonding interface is laid between the base specimen and the sheet and between the sheet and the asphalt layer.

After compacting of the test specimen, the bitumen sheet is recovered for observation of its condition and any perforations. Depending on the results of the observations, the watertightness of the recovered bitumen sheet should be checked.

EN 14692:2005 (E)**4.2 Apparatus and materials**

- 4.2.1** Compaction equipment, as referred to in EN 13375.
- 4.2.2** Standard equipment and materials, such as, site gas torch, brush, etc.
- 4.2.3** Oven, with circulating air (without fresh supply), capable of maintaining (100 ± 5) °C.

4.3 Preparation of test specimens**4.3.1 General**

Take samples and test pieces in accordance with EN 13416.

4.3.2 Test specimen with sheet bonded to the base specimen (Method 1)

The test specimen is prepared in accordance with EN 13375.

The size of the test specimen is 600 mm x 400 mm.

4.3.3 Test specimen with sheet not bonded to the base specimen (Method 2)

Place a de-bonding interface between the base specimen and the bitumen sheet, and on the upper surface of the bitumen sheet to prevent the asphalt layer adhering to it.

For the interface between the base specimen and the bitumen sheet, use one non-woven glass fibre sheet of (70 ± 5) g/m².

For the interface between the bitumen sheet and the asphalt layer mix, use two non-woven glass fibre sheets of (70 ± 5) g/m².

The size of the test specimen is 300 mm x 300 mm.

4.3.4 Asphalt layer, compaction and test specimens**4.3.4.1 General**

Lay and compact the asphalt layer mix in accordance with EN 13375.

4.3.4.2 Test specimen with sheet bonded to the base specimen (Method 1)

In the case of the sheet bonded to the base specimen, obtain four equal parts by wet sawing the test specimen, prepared as described in 4.3.1 and 4.3.2.

4.3.4.3 Test specimen with sheet not bonded to the base specimen (Method 2)

In the case of test specimens with de-bonding interfaces, let the asphalt layer cool and remove the sheet for visual inspection and testing.

4.4 Procedure

4.4.1 Test specimen with sheet bonded to the base specimen (Method 1)

4.4.1.1 Inspect visually the cross-section of the parts of the test specimen to check the sheet/asphalt layer interface, and whether any binder from the sheet is bleeding into the asphalt layer.

4.4.1.2 Heat two parts of the test specimen in an oven at $(100 \pm 5) ^\circ\text{C}$ for (120 ± 5) min.

4.4.1.3 Separate the bitumen sheet manually from the base specimen and asphalt layer, taking care not to destroy the asphalt layer so that its interface surface can be examined.

4.4.1.4 Check the condition of the bitumen sheet that was removed from the part of the test specimen, and hold up to the light to detect any perforations due to compacting of the asphalt layer.

4.4.1.5 Remove the binder from the reinforcement by extraction (for example with toluene as solvent).

4.4.1.6 Dry the reinforcement in an oven at $(100 \pm 5) ^\circ\text{C}$ for 30 min approximately, and hold up to the light to detect any perforations.

4.4.1.7 In case of perforations, test on the two remaining parts of the test specimen (see 4.4.1.2) the waterproofing complex (bitumen sheet and asphalt layer) for watertightness according to the test method described in normative Annex A.

4.4.2 Test specimen with sheet not bonded to the base specimen (Method 2)

Separate the bitumen sheet, and visually inspect its condition. If the visual inspection reveals perforations in the bitumen sheet, the watertightness test need not be performed. If the visual inspection reveals no perforations in the bitumen sheet, test the bitumen sheet for watertightness according to EN 1928, Method A with a pressure of 100 kPa for 24 h.

4.5 Expression of results

4.5.1 Visual inspection test

For Method 1: Report any perforation after the operations of 4.4.1. In case of no perforations, express the resistance to compaction of an asphalt layer as "resistant".

For Method 2: Report any perforation after the operations of 4.4.2. In case of perforations, express the resistance to compaction of an asphalt layer as "not resistant".

4.5.2 Watertightness test

For Method 1: In case of perforations detected according to 4.4.1, express the resistance to compaction of an asphalt layer as "resistant" if no leak is detected when tested according to annex A.

For Method 2: Express the resistance to compaction as "resistant" if the bitumen sheet does not leak when tested according to the method given in 4.4.2.

4.5.3 Precision of the test method

No precision data is currently available.