Flexible sheets for waterproofing - Waterproofing of concrete bridge decks and other concrete surfaces trafficable by vehicles - Determination of shear strength

EESTI STANDARDIKESKUS
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NATIONAL FOREWORD

See Eesti standard EVS-EN 13653:2017 sisaldab Euroopa standardi EN 13653:2017 ingliskeelset teksti.	This Estonian standard EVS-EN 13653:2017 consists of the English text of the European standard EN 13653:2017.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 29.03.2017.	Date of Availability of the European standard is 29.03.2017.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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English Version

Flexible sheets for waterproofing - Waterproofing of concrete bridge decks and other concrete surfaces trafficable by vehicles - Determination of shear strength

Feuilles souples d'étanchéité - Étanchéité des tabliers de ponts en béton et autres surfaces en béton circulables par les véhicules - Détermination de la résistance au cisaillement

Abdichtungsbahnen - Abdichtung von Betonbrücken und anderen Verkehrsflächen aus Beton - Bestimmung der Schubfestigkeit

This European Standard was approved by CEN on 6 February 2017.

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European foreword

This document (EN 13653:2017) 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of an identical text or by endorsement, at the latest by September 2017, and conflicting national standards shall be withdrawn at the latest by September 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 13653:2004.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

The significant technical changes are the new reference to prEN 17048 in Clause 2, Normative references, and the substitution of the term “bitumen sheet” with the generic wording “waterproofing sheet” in every clause where needed.

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

Introduction

The purpose of the test is to determine the shear strength properties of the waterproofing system. This test simulates action of dynamic forces (e.g. braking).

1 Scope

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

This document specifies a test method for the evaluation of the shear strength properties of the waterproofing sheet system applied to a concrete surface and with an asphalt layer.

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

EN 13416, *Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Rules for sampling*

EN 14695, *Flexible sheets for waterproofing - Reinforced bitumen sheets for waterproofing of concrete bridge decks and other trafficked areas of concrete - Definitions and characteristics*

prEN 17048, *Flexible sheets for waterproofing - Plastic and rubber sheets for waterproofing of concrete bridge decks and other trafficked areas of concrete - Definitions and characteristics*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13375, EN 14695, prEN 17048 and the following apply.

3.1
shear strength
shear stress at maximum force, when testing the shear resistance in a waterproofing system

4 Test methods

4.1 Principle

A force is induced in the waterproofing system laid between base specimen and asphalt layer to determine the shear strength of the waterproofing. Testing is carried out in compression at constant displacement rate. The force is applied at an angle of 15° to the plane of shearing.

4.2 Apparatus and materials

a) A loading device capable of producing a load of 10 kN with an accuracy of 1 % at a displacement rate relative to the supports of (10 ± 1) mm/min (Figure 1). The loading shall be applied through the centre of the waterproofing. The recording device shall be capable of measuring the force to an accuracy of 1 % and displacement to 0,1 mm. The device on which the test specimen is supported shall be at an angle of inclination of (15 ± 1) ° with regard to the direction of load at the start of the test.

b) Load application without any resulting momentum shall be ensured by the chosen manner of support (for example by a gimbal mounting).