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

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EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 13653:2004 sisaldab Euroopa standardi EN 13653:2004 ingliskeelset teksti. Käesolev dokument on jõustatud 21.12.2004 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 13653:2004 consists of the English text of the European standard EN 13653:2004. This document is endorsed on 21.12.2004 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: 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. This European Standard 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.	**Scope:** 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. This European Standard 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.

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

Systèmes d'étanchéité pour tabliers de ponts en béton et autres surfaces en béton circulables par les véhicules - Méthode d'essai - Détermination de la résistance au cisaillement

Abdichtungsbahnen - Abdichtungssysteme auf Beton für Brücken und andere Verkehrsflächen - Bestimmung der Schubfestigkeit

This European Standard was approved by CEN on 22 July 2004.

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, 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.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Contents

Foreword

This document (EN 13653:2004) 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 March 2005, and conflicting national standards shall be withdrawn at the latest by June 2006.

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.

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 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 13375:2004, *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*

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*

3 Terms and definitions

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

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^{o} to the plane of shearing.

4.2 Apparatus and materials

a) A loading device capable of producing a maximum load of 10 kN at a displacement rate relative to the supports of (10 ± 1) mm/min (Figure 1). The loading shall be applied through the center 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).

c) Conditioning device, giving a temperature of (23 ± 2) °C.

d) Device for measuring test temperature with an accuracy of at least ± 0,5 °C.