

Flexible sheets for waterproofing - Bitumen sheets for roof waterproofing - Determination of flow resistance at elevated temperature

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NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1110:2011 sisaldab Euroopa standardi EN 1110:2010 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 31.01.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 22.12.2010.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1110:2011 consists of the English text of the European standard EN 1110:2010.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 31.01.2011 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 22.12.2010.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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English Version

Flexible sheets for waterproofing - Bitumen sheets for roof waterproofing - Determination of flow resistance at elevated temperature

Feuilles souples d'étanchéité - Feuilles d'étanchéité de toitures bitumineuses - Détermination de la résistance au fluage à température élevée

Abdichtungsbahnen - Bitumenbahnen für Dachabdichtungen - Bestimmung der Wärmestandfestigkeit

This European Standard was approved by CEN on 28 November 2010.

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Foreword

This document (EN 1110:2010) 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of an identical text or by endorsement, at the latest by June 2011, and conflicting national standards shall be withdrawn at the latest by June 2011.

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

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Introduction

This European Standard is intended for characterisation and/or classification of bitumen sheets as manufactured or supplied for use. The 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 method is intended to be used in conjunction with EN 13707.

This test is used to determine the flow resistance of the coating or to determine the flow resistance limit of a bitumen sheet. The test result depends on the type of coating, the sheet thickness, type and position of the reinforcement and type and mass of the granules on the surface. The use of test results to directly compare the performance of the coating in sheets of different composition is strictly limited because of the influence of other parameters which have not been quantified. Results from sheets with the same composition can be used to compare the performance of the coating directly.

The test primarily serves to characterize bitumen sheets. It can also be used to evaluate the change in flow resistance limit as a result of artificial ageing. It is not recommended to correlate the test results directly to the actual performance expected at elevated temperatures in service.

1 Scope

This European Standard specifies the determination of flow resistance of bitumen sheets at elevated temperature. The test is carried out at a specified temperature or consecutively at different temperatures in order to determine the flow resistance limit. Therefore, the test can be used to provide proof of the flow resistance required for a product or to determine the flow resistance limit specific to the product e.g. in order to establish the change in this behaviour as a result of artificial ageing.

The test is not applicable to bitumen sheets without reinforcement.

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

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

flow resistance

ability of bitumen sheet test specimen to be suspended vertically under specified temperature conditions without the coating moving by more than 2 mm and no occurrence of falling droplets

3.2

flow resistance limit

F

highest temperature where less than 2 mm displacement of the coating of a vertically suspended bitumen sheet test specimen is measured and no falling droplets from the coating of the test specimen are observed

3.3

flow

maximum difference between the longitudinal dimension of the test specimen before and after heating within the oven

3.4

falling droplets

oily constituents emitted from the coating of the sheet, which are observed after heating, on a white piece of paper placed under the test specimen during the heating within the oven

NOTE Mineral particles (e.g. slate, sand, talcum) are not a part of the coating and should therefore not be assessed as falling droplets.

4 Principle

Test specimens taken from the test sample are suspended vertically in an oven at a specified temperature. The maximum longitudinal dimensions of the test specimen are measured before and after being heated in the oven. The displacement is calculated as the difference between the longitudinal dimension over the full width of the test specimen, before and after being heated within the oven. Failure is defined as a difference greater than 2,0 mm and/or the occurrence of droplets.