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Utgåva 1

Flexibla tätskikt – Bestämning av fläknings- hållfasthet i fogar –

Del 1: Bitumenbaserade tätskikt för tak

Flexible sheets for waterproofing –

Part 1: Bitumen sheets for roof waterproofing –
Determination of peel resistance of joints

ICS 91.100.50

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Postadress: SIS Förlag AB, 118 80 STOCKHOLM
Telefon: 08 - 555 523 10. *Telefax:* 08 - 555 523 11
E-post: sis.sales@sis.se. *Internet:* www.sis.se

EUROPEAN STANDARD
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English version

Flexible sheets for waterproofing - Part 1: Bitumen sheets for roof waterproofing - Determination of peel resistance of joints

Feuilles souples d'étanchéité - Partie 1: Feuilles d'étanchéité de toiture bitumineuses - Détermination de la résistance au pelage des joints

Abdichtungsbahnen - Teil 1: Bitumenbahnen für Dachabdichtungen - Bestimmung des Schälwiderstandes der Fügenähte

This European Standard was approved by CEN on 13 August 1999.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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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of an identical text or by endorsement, at the latest by March 2000, and conflicting national standards shall be withdrawn at the latest by March 2000.

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 the characterisation of bitumen sheets as manufactured or supplied before 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 is intended to be used in conjunction with European Standards on product specifications for reinforced and unreinforced bitumen sheets for roofing.

1 Scope

This European Standard specifies a test method for determining the resistance to peeling of joints between two adjacent sheets of the same bitumen-based roofing sheets.

This test method is intended to be used for testing the joints in mechanically fastened single layer bitumen roofing.

The peeling characteristics of a joint between two widths of bitumen-based sheets vary considerably depending on the material, on the method of jointing (flame or heat welding, hot adhesive or bitumen, cold adhesive) etc. the size of the overlap and the workmanship.

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 edition of the publication referred to applies.

EN 10002 - 2, Tensile testing of metallic materials - Part 2 : Verification for the force measuring system of the tensile testing machine.

3 Definitions

For the purpose of this standard, the definitions indicated in 3.1 and the corresponding European Standard on product specifications apply.

3.1 peel resistance: The tensile force required to completely separate a prepared joint test specimen by peeling.

4 Principle

A test specimen of a joint is pulled at a constant speed until complete separation occurs. The tensile force is continuously recorded throughout the test.

5 Apparatus

Tensile testing machine equipped with a continuous recording of force and corresponding distance, capable of maintaining uniform rate of grip separation as specified below.

The tensile testing machine shall have a sufficient loading capacity (at least 2000 N) and a sufficient distance of grip separation, with a grip separation speed of (100 ± 10) mm/min. The width of grips shall be not less than 50 mm.

The tensile testing machine shall be equipped with grips of a type which maintains or increases the gripping pressure as a function of the increase of the force applied to the test specimen. The test specimen should be held so that it does not slip in the grips more than 2 mm. To prevent slipping from the grips exceeding 2 mm it will be permitted to use cooled grips

The method of gripping shall not induce premature failure at or in the grips.

The force measuring system shall meet at least class 2 in accordance with table 2 of EN 10002 - 2 (i. e. $\pm 2\%$).

6 Sampling and preparation of joint test pieces

Samples shall be taken in accordance with the corresponding European Standard.

Joint Test pieces to be used for providing test specimens should be previously conditioned for a least 20 h at $(23 \pm 2)^\circ\text{C}$ and at a relative humidity, between 30 % and 70 %.

Test pieces of the sheet are joined by the method(s) to be used for installation with the unbonded material left on one side of the joint (see figure 1).

Joint test pieces should be prepared representing all the ways of jointing.

7 Preparation test specimens

From each of these joint test piece, five rectangular test specimens (50 ± 1) mm wide shall be cut, perpendicular to the joint. They shall have such a length, that the ends of the specimen fill the clamps and that the complete overlap can be tested (see figure 1 and figure 2).

Test specimens should be conditioned for at least 20 h before the test at $(23 \pm 2)^\circ\text{C}$ and at a relative humidity between 30 % and 70 %.

When cold adhesives are used for jointing it may be necessary to increase the conditioning time according to the manufacturer's information