SLOVENSKI STANDARD
SIST EN 12317-1:2000

01-junij-2000

Hidroizolacijski trakovi - 1. del: Bitumenski trakovi za tesnjenje streh - Določevanje strižne trdnosti spojev

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

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

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

Ta slovenski standard je istoveten z: **EN 12317-1:1999**

ICS:

91.060.20	Strehe	Roofs
91.100.50	Veziva. Tesnilni materiali	Binders. Sealing materials

SIST EN 12317-1:2000 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 12317-1

September 1999

ICS 91.100.50

English version

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

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

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

This European Standard was approved by CEN on 21 August 1999.

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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

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

Ref. No. EN 12317-1:1999 E

Contents

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 September 2001.

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 characteristics on reinforced and unreinforced bitumen sheets for roof waterproofing.

1 Scope

This European Standard specifies a test method for determining the resistance to shearing of a joint between two adjacent sheets of the same bitumen roofing sheets.

This test method shall be used mainly for testing the joints in mechanically fastened or ballasted single layer bitumen roofing.

The shearing characteristics of a joint between two widths of bitumen sheets vary considerably depending on the method of jointing (flame or heat welding, hot adhesive e.g. 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,	Metallic materials - Tensile testing - Part 2 : Verification of the force measuring system of the tensile testing machines

3 Definitions

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

3.1 shear resistance: The maximum tensile force required to extend a prepared joint test specimen, in shear, until it breaks or separates.

4 Principle

A test specimen of a joint is pulled at a constant speed until it breaks or separates. 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 a uniform rate of grip separation as specified below. The tensile testing machine shall have a sufficient loading capacity (at least 2000 N) and a grip separation speed of (100 ± 10) mm per minute. The width of grips shall not be less than 50 mm.

The tensile testing machine shall be provided with a type of grip which maintains or increases grip pressure as the force applied to the specimen increases and capable of holding the test specimen in such a manner that slip relative to the grips is limited to a maximum of 2 mm. To prevent slippage from the grips exceeding 2 mm, it will be permitted to use cooled grips. The gripping system shall not produce premature failure at or in the grips.

The force measuring system shall meet at least class 2 in accordance with EN 10002-2 (i.e. ± 2%).

6 Sampling

Test samples shall be taken in accordance with the corresponding European Standard.

Test samples to be used for providing test specimens should be previously conditioned for at least 20 h at (23 ± 2)°C and at a relative humidity between 30 % and 70 %.

Test samples of the sheet are joined by the method(s) to be used for installation, both for side lap and end lap jointing, with an overlap that is specified for the product.

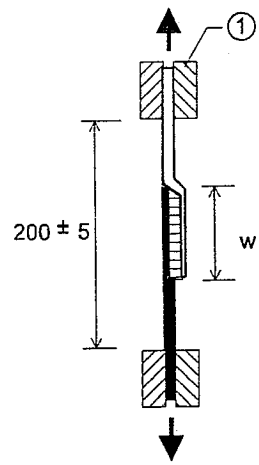
7 Preparation of test samples and test specimens

Out of each of these joint samples five rectangular test specimens (50 ± 1)mm wide shall be taken perpendicular to the joint. They shall have such a length, so that the initial distance between the two grips is (200 ± 5) mm (see figure 1).

Test specimens should be conditioned before the test for at least 20 h at (23 ± 2)°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.

Dimensions in millimetres



1 - grip
w - width of joint

Figure 1: Shear strength testing of joints

8 Procedure

The test specimen shall be firmly held in the grips of the tensile test machine, taking care that the longitudinal axis of the test specimen, the axis of the tensile testing machine and the grips are correctly aligned. The clear distance between the grips shall be (200± 5) mm. No preload shall be applied.

Each specimen should be marked at the grips in order to identify any slippage out of the grips.

The test is carried out at a temperature of (23 ± 2)°C and at a constant separating speed for the grips of (100 ± 10) mm per minute.

The applied tensile force shall be recorded continuously until the specimen breaks. The mode of failure of the specimen shall be noted.

Ignore any results of tests where the test specimen breaks in or at the grips, or slips in the grips of the machine more than 2mm at either grip and repeat the test with a new test specimen.

9 Expression of results, evaluation and precision of test method

9.1 Evaluation

The shear resistance of the specimen is the maximum force recorded during the test, expressed as N per 50 mm.

List the individual values for each set of five specimens and calculate the mean value and the standard deviation.

9.2 Precision of the test method

The precision of the test method is not specified.

10 Test Report

The test report shall include at least the following information:

a) all details necessary to identify the product tested;

b) a reference to this European Standard (EN 12317-1) and any deviation from it;

c) information of sampling in accordance with clause 6;

d) details of preparation of the test specimens in accordance with clause 7 and a detailed description of the method of jointing;

e) the test results in accordance with clause 9.1

f) the date of the test.