



SWEDISH
STANDARDS
INSTITUTE

SVENSK STANDARD SS-EN 1108

Fastställd 2000-03-31

Utgåva 1

Flexibla tätskikt – Bitumenbaserade tätskikt för tak – Bestämning av dimensionsstabilitet vid cykliska temperaturväxlingar

Flexible sheets for waterproofing – Bitumen sheets for roof waterproofing – Determination of form stability under cyclical temperature changes

ICS 75.140

Språk: engelska

Tryckt i december 2002

Europastandarden EN 1108:1999 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 1108:1999.

The European Standard EN 1108:1999 has the status of a Swedish Standard. This document contains the official English version of EN 1108:1999.

Dokumentet består av 10 sidor.

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 1108

August 1999

ICS 75.140

English version

**Flexible sheets for waterproofing - Bitumen sheets for roof
waterproofing - Determination of form stability under cyclical
temperature changes**

Feuilles souples d'étanchéité - Feuilles d'étanchéité de
toiture bitumineuses - Détermination de la stabilité de
forme lors d'une variation cyclique de température

Abdichtungsbahnen - Bitumenbahnen für
Dachabdichtungen - Bestimmung der Formstabilität bei
zyklischer Temperaturänderung

This European Standard was approved by CEN on 11 July 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

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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 February 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 and/or classification 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 used for determining the form stability of bitumen sheets whilst fully bonded to a substrate and subjected to thermal cycling. The aim is to demonstrate permanent form stability under the thermal stressing occurring in practice. The test can be used to demonstrate the basic properties of direct relevance to the fitness for purpose of the bitumen sheet.

1 Scope

This European Standard specifies the determination of form stability under cyclical temperature changes. It is mainly applicable to metal faced and/or metal cored bitumen sheets fully bonded to a substrate. This test is not intended to be applied to vapour control layers.

2 Normative references

This European Standard incorporates by dated or undated references 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.

ISO 5725 : 1986 Precision of test methods - Determination of repeatability and reproducibility for a standard test method by inter-laboratory tests.

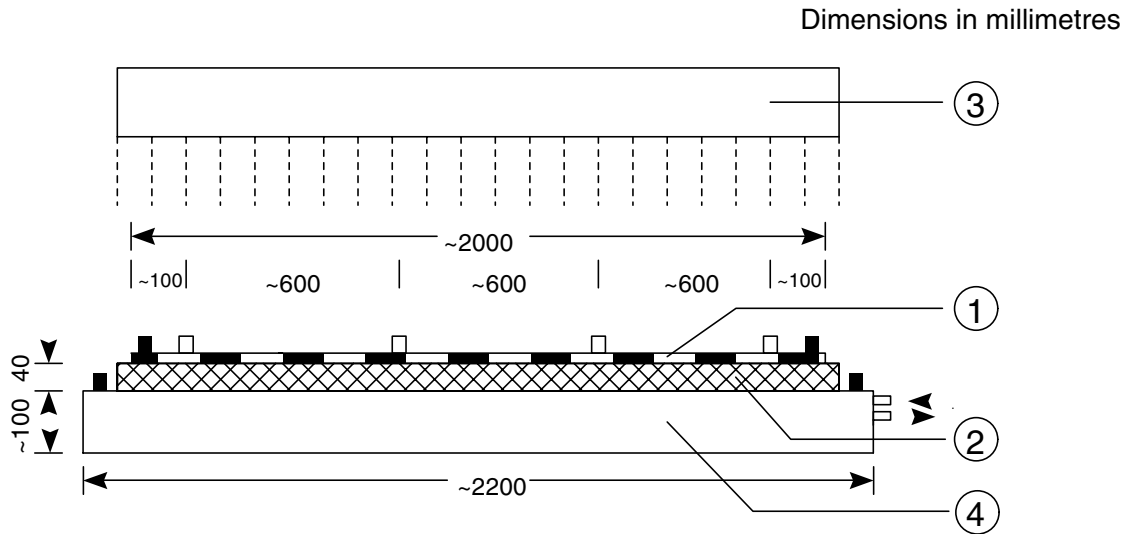
3 Definitions

For the purposes of this standard the definitions indicated in 3.1 and in the corresponding European Standards on product specifications apply.

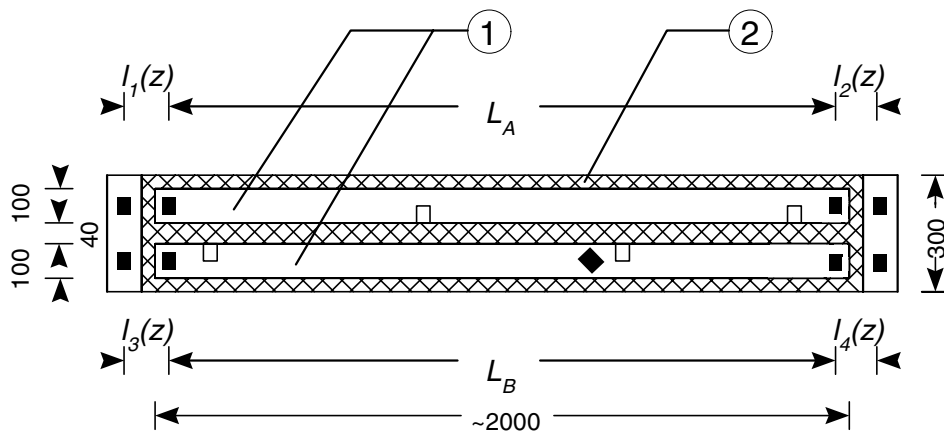
3.1 form stability: The change in length of a test specimen taken from a bitumen sheet, containing a metal foil, when subjected to specified cyclical temperature change.

4 Principle

The test specimens taken from the test sample are fully bonded to a dimensionally stable and heat resistant insulant and subjected to ten cycles of thermal stressing of the upper face. The change in dimensions is measured after each cycle and evaluated at the end of the test.



1a) Side view



1b) Top view

- Legend:
- measuring marks on the sample surface and cooling block
 - 4 thermocouples
 - ◆ 1 control thermocouple
 - (1) test specimens (A and B)
 - (2) thermal insulation (cellular glass)
 - (3) infrared heater
 - (4) metal block with water cooling

Figure 1: Apparatus and arrangement of test specimens

5 Apparatus

5.1 Length measuring device, measuring length of at least 2000 mm, with a scale division of at least 1 mm.

5.2 Metal cooling block (approximately 2200 mm x 300 mm x 100 mm) for supporting the thermal insulation and test specimens (see figure 1), with forced cold water circulating, with a uniform temperature no greater than 22 °C.

5.3 Insulation panels, made of cellular glass with a density of approximately 125 kg/m³ and approximately 40 mm thick.