

Test methods for external fire exposure to roofs

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-ENV 1187:2006 sisaldab Euroopa standardi ENV 1187:2002 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 28.04.2006 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 08.05.2002.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-ENV 1187:2006 consists of the English text of the European standard ENV 1187:2002.

This standard is ratified with the order of Estonian Centre for Standardisation dated 28.04.2006 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 08.05.2002.

The standard is available from Estonian standardisation organisation.

ICS 13.220.50

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English version

Test methods for external fire exposure to roofs

Méthodes d'essai pour l'exposition des toitures à un feu
extérieur

Prüfverfahren zur Beanspruchung von Bedachungen durch
Feuer von außen

This European Prestandard (ENV) was approved by CEN on 5 April 2002 as a prospective standard for provisional application.

The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into a European Standard.

CEN members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document ENV 1187:2002 has been prepared by Technical Committee CEN/TC 127 "Fire safety in buildings", the secretariat of which is held by BSI.

This document supersedes CR 1187:2001.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this European Prestandard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

The first mandate given to CEN/TC 127 on fire resistance testing in support of the Construction Products Directive required two test methods for external fire exposure to roofs. One test method was to include the effect of a burning brand, the other was to include the effect of a burning brand together with wind and supplementary radiant heat. These two draft methods were circulated for the CEN 6 month enquiry, but many countries did not support the two and several countries requested that only one method should be prepared by CEN.

The topic was referred to the EC Fire Regulators' Group. Discussions took place in both the Fire Regulators' Group and the Standing Committee on Construction, and in April 1997 CEN/TC 127 was requested to produce a standard incorporating the two existing draft methods and the Nordtest method.

The Standing Committee accepted this as a short-term solution and strongly expressed the view that a truly harmonised test procedure should be developed in the long term i.e. a single test procedure for this characteristic.

Caution

The attention of all persons concerned with managing and carrying out these tests is drawn to the fact that fire testing can be hazardous and that there is a possibility that toxic and/or harmful smoke and gases can be evolved during the test.

An assessment of all potential hazards and risks to health should be made and safety precautions should be identified and provided. Written safety instructions should be issued. Appropriate training should be given to all relevant personnel. Laboratory personnel should ensure that they follow written safety instructions at all times.

1 Scope

This European Standard specifies three methods for determining the performance of roofs to external fire exposure. The three methods assess the performance of roofs under the following conditions:

test 1 - with burning brands

test 2 - with burning brands and wind

test 3 - with burning brands, wind and supplementary radiant heat.

The tests assess the fire spread across the external surface of the roof, the fire spread within the roof, the fire penetration (tests 1 and 3) and the production of flaming droplets or debris falling from the underside of the roof or from the exposed surface (tests 1 and 3).

Tests 2 and 3 are not applicable to geometrically irregular roofs or roof mounted appliances e.g. ventilators and roof lights.

NOTE The three tests listed above do not imply any ranking order. Each test stands on its own without the possibility to substitute or exchange one for another.

2 Normative references

This European Prestandard 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 Prestandard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN ISO 13943, *Fire safety – Vocabulary (ISO 13943:1999)*.

3 Terms and definitions

For the purposes of this European Prestandard, the terms and definitions given in EN ISO 13943, together with the following, apply.

3.1

roof

covering and sealing systems including any insulating layers or vapour barriers normally provided together with their supporting elements including attachment (glued, mechanically fastened etc.), and roof lights or other closures for roof apertures that are intended to provide a weatherproof surface

3.2

material

basic single substance or a uniformly dispersed mixture of substances (e.g. metal, stone, wood, bitumen, concrete, mineral wool)

3.3

damaged material

material that has been burnt, charred, melted or otherwise visually changed by heat. Discolouration and soot deposits are not to be regarded as damaged material

3.4

burnt material

material that has been destroyed by combustion or pyrolysis

3.5

composite

combination of materials which is generally recognized in building construction as a discrete entity (e.g. coated or laminated products such as roofing felts)

3.6

assembly

fabrication of materials and / or composites (e.g. sandwich panels)

3.7

product

material, composite material or assembly about which information is required

3.8

specimen

representative section of the roof/roof covering prepared for the purpose of the test

3.9

continuous deck

element with a continuous supporting function in which the gap between adjacent elements is not greater than 0,5 mm ((5,0 ± 0,5) mm in the case of wooden planks with plain edges)