DD CEN/TS 1187:2012



BSI Standards Publication

Test methods for external fire exposure to roofs



...making excellence a habit.™

National foreword

This Draft for Development is the UK implementation of CEN/TS 1187:2012. It supersedes DDENV1187:2002 which is withdrawn.

This publication is not to be regarded as a British Standard.

It is being issued in the Draft for Development series of publications and is of a provisional nature. It should be applied on this provisional basis, so that information and experience of its practical application can be obtained.

Comments arising from the use of this Draft for Development are requested so that UK experience can be reported to the international organization responsible for its conversion to an international standard. A review of this publication will be initiated not later than 3 years after its publication by the international organization so that a decision can be taken on its status. Notification of the start of the review period will be made in an announcement in the appropriate issue of *Update Standards*.

According to the replies received by the end of the review period, the responsible BSI Committee will decide whether to support the conversion into an international Standard, to extend the life of the Technical Specification or to withdraw it. Comments should be sent to the Secretary of the responsible BSI Technical Committee at British Standards House, 389 Chiswick High Road, London W4 4AL.

The UK participation in its preparation was entrusted to Technical Committee FSH/22/-/8, Fire resistance tests for external fire exposure for roofs.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2012

ISBN 978 0 580 67070 1

ICS 13.220.50; 91.060.20

Compliance with a British Standard cannot confer immunity from legal obligations.

This Draft for Development was published under the authority of the Standards Policy and Strategy Committee on 31 January 2012.

Amendments issued since publication

Date Text affected

TECHNICAL SPECIFICATION SPÉCIFICATION TECHNIQUE TECHNISCHE SPEZIFIKATION

CEN/TS 1187

January 2012

ICS 13.220.50; 91.060.20

Supersedes ENV 1187:2002

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 Technical Specification (CEN/TS) was approved by CEN on 23 August 2011 for provisional application.

The period of validity of this CEN/TS 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 CEN/TS can be converted into a European Standard.

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

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

© 2012 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. CEN/TS 1187:2012: E

This is a preview. Click here to purchase the full publication.

Contents Page Foreword 5 Introduction6 1 2 3 4 4.1 4.2 4.3 4.4 4.4.1 4.4.2 Selection of standard supporting decks.......11 4.4.3 4.4.4 4.5 4.5.1 4.5.2 4.6 4.7 4.7.1 4.7.2 4.7.3 4.7.4 End of the test ______14 48 4.8.1 4.8.2 4.8.3 4.8.4 4.9 4.10 4.10.1 4.10.2 Test equipment 18 5.1 5.2 5.2.1 5.2.2 5.2.3 5.3 5.4 5.4.1 542 Conditioning......22 5.5 5.5.1 5.5.2 Test specimen ______22 5.6 5.7 Test procedure ______23 5.8 Observations and measurements 24 5.9

| 5.10 | Direct field of application of test results | 25 |
|--------------------------|---|----|
| 6 | Test 3: Method with burning brands, wind and supplementary radiant heat | |
| 6.1 | Test equipment | |
| 6.1.1 | Brands | |
| 6.1.2 | Wind | |
| 6.1.3 | Radiant panel | |
| 6.1.4 | Timing device | |
| 6.1.5 | Calibration element | |
| 6.1.6 | Specimen holder | |
| 6.2 | Calibration | |
| 6.2.1 | General | |
| 6.2.2 | Specimen holder | |
| 6.2.3 | Wind | |
| 6.2.4 | Radiant level | |
| 6.3 | Test conditions | 27 |
| 6.4 | Test specimen | 27 |
| 6.4.1 | General | |
| 6.4.2 | Selection of standard supporting decks | 28 |
| 6.4.3 | Positioning of joints | |
| 6.4.4 | Edge detailing | 29 |
| 6.4.5 | Protection of the edges | 29 |
| 6.5 | Conditioning | 29 |
| 6.6 | Test environment | |
| 6.7 | Test procedure | 29 |
| 6.7.1 | Preparation of brands | |
| 6.7.2 | Start of the test | |
| 6.7.3 | Positioning of the brands | |
| 6.7.4 | End of the test | |
| 6.7.5 | Post test examination | |
| 6.8 | Observations and measurements | 30 |
| 6.8.1 | General | |
| 6.8.2 | External fire spread | |
| 6.8.3 | Fire penetration and openings | |
| 6.8.4 | Damage | |
| 6.9 | Test report | |
| 6.10 | Direct field of application of test results | |
| 6.10.1 | Roof pitch | |
| 6.10.2 | Nature of the deck | |
| 7 | Test 4 – Method with two stages incorporating burning brands, wind and supplementary radiant heat | |
| 7.1 | Test equipment | |
| 7.1.1 | Brands | |
| 7.1.2 | Wind | |
| 7.1.3 | Radiant panel | |
| 7.1.3 7.1.4 | Calibration element | |
| 7.1. 5 | Timing device | |
| 7.1.6 | Specimen holder | |
| 7.1.0 | Calibration | |
| 7.3 | Test conditions | |
| 7.3 7.4 | Test specimen | |
| 7. 4 7.4.1 | Number of test specimens | |
| 7.4.1 | Construction of specimens | |
| 7.4.2 7.5 | Conditioning | |
| 7.6 | Test environment | |
| 7.0 7.7 | Test procedure | |
| 7.7.1 | Preliminary ignition test with burning brands (stage 1) | |
| 7.7.1 7.7.2 | Penetration test with burning brands, wind and supplementary radiant heat (stage 2) | |
| 7.7.2 7.7.3 | End of test End of test | |
| 1.1.3 | LIIU UI lest | ə/ |

DD CEN/TS 1187:2012 **CEN/TS 1187:2012 (E)**

| 7.8 | Observations and measurements | |
|--------|---|----|
| 7.8.1 | General | 37 |
| 7.8.2 | Preliminary ignition test with burning brands (stage 1) | 37 |
| 7.8.3 | Penetration test with burning brands, wind and supplementary radiant heat (stage 2) | |
| 7.9 | Test report | |
| 7.10 | Direct field of application of test results – Roof pitch | 38 |
| 8 | Figures | 39 |
| 8.1 | Test 1 | 39 |
| 8.2 | Test 2 | 44 |
| 8.3 | Test 3 | 51 |
| 8.4 | Test 4 | 57 |
| Biblio | graphy | 60 |

Foreword

This document (CEN/TS 1187:2012) has been prepared by Technical Committee CEN/TC 127 "Fire safety in buildings", the secretariat of which is held by BSI.

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.

This document supersedes ENV 1187:2002.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.