Fire resistance tests for service installations - Part 4: Linear joint seals

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EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 1366-4:2006 sisaldab Euroopa standardi EN 1366-4:2006 ingliskeelset teksti. Käesolev dokument on jõustatud 29.06.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 1366-4:2006 consists of the English text of the European standard EN 1366-4:2006. This document is endorsed on 29.06.2006 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This European Standard specifies a method for determining the fire resistance of linear joint seals based on their intended end use. This European Standard is used in conjunction with EN 1363-1.	**Scope:** This European Standard specifies a method for determining the fire resistance of linear joint seals based on their intended end use. This European Standard is used in conjunction with EN 1363-1.

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Fire resistance tests for service installations - Part 4: Linear joint seals

Essai de résistance au feu des installations - Partie 4: Calfeutrements de joints linéaires

Feuerwiderstandsprüfungen für Installationen - Teil 4: Abdichtungssysteme für Bauteilfugen

This European Standard was approved by CEN on 17 April 2006.

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, 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 and United Kingdom.

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Foreword

This European Standard (EN 1366-4:2006) has been prepared by Technical Committee CEN/TC 127 “Fire safety in buildings”, 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 November 2006, and conflicting national standards shall be withdrawn at the latest by November 2006.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of the Construction Products Directive.

EN 1366 ‘Fire resistance tests for service installations’ consists of the following Parts:

— Part 1: Ducts

— Part 2: Fire dampers

— Part 3: Penetration seals

— Part 4: Linear joint seals

— Part 5: Service ducts and shafts

— Part 6: Raised access and hollow core floors

— Part 7: Conveyor systems and their closures

— Part 8: Smoke extraction ducts

— Part 9: Single compartment smoke extraction ducts

— Part 10: Smoke control dampers

— Part 11: Fire protection system for essential services (in course of preparation)[1)]

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, 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 and United Kingdom.

[1)] To be published.

Introduction

Linear joint seals are positioned in joints, voids, gaps or other discontinuities within one or between two or more construction elements.

Normally such openings are denoted as linear because their length is greater than their width - defined by a typical ratio of at least 10:1 in practice.

Joints are present in buildings due to the following:

a) acceptable dimensional tolerances between two or more building elements, e.g. between non-load bearing walls and floors;

b) by design to accommodate various movements induced by thermal differentials, seismicity and movement induced by wind loads;

c) as a result of inadequate design, inaccurate assembly, repairs or damage to the building.

The purpose of the tests in this European Standard is to assess:

d) the effect of a linear joint seal on the integrity and insulation of the construction;

e) the integrity and insulation performance of the linear joint seal;

f) the effect of movement within the supporting construction on the fire performance of linear joint seals (see Annex B).

The results of these tests are one factor in assessing the fire performance of joint seals.

Annex A describes the principles of standard conditions for linear joint seals where no mechanically induced relative movement occurs between the joint faces.

Annex B provides standard conditions for joints with mechanically induced movement of opposing joint faces during the fire resistance test.

CAUTION The attention of all persons concerned with managing and carrying out this fire resistance test is drawn to the fact that fire testing may be hazardous and that there is a possibility that toxic and/or harmful smoke and gases may be evolved during the test. Mechanical and operational hazards may also arise during the construction of the test elements or structures, during their testing and during the disposal of test residues.

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 relevant personnel. Laboratory personnel should ensure that they follow written safety instructions at all times.

1 Scope

This European Standard specifies a method for determining the fire resistance of linear joint seals based on their intended end use. This European Standard is used in conjunction with EN 1363-1.

The following tests are included in this European Standard:

— no mechanically induced movement;

— mechanically induced movement, either prior to or during fire exposure.

This European Standard does not provide quantitative information on the rate of leakage of smoke and/or hot gases, or on the transmission or generation of fumes.

The load-bearing capacity of a linear joint seal is not addressed in this European Standard.

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1363-1:1999, *Fire resistance tests — Part 1: General requirements*

EN 1363-2, *Fire resistance tests — Part 2: Alternative and additional procedures*

EN ISO 13943:2000, *Fire safety – Vocabulary (ISO 13943:2000)*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 1363-1:1999 and EN ISO 13943:2000 and the following apply.

3.1
linear joint
linear void having a length to width ratio of at least 10:1 within one or between two or more juxtaposed construction elements

NOTE Typical locations of linear joints include floors, the perimeter of floors, walls, ceilings and roofs.

3.2
linear joint seal
system designed to maintain the fire separating function and, if relevant, to accommodate a specified degree of movement within the linear joint

3.3
movement capability
maximum amount of movement the joint seal is able to tolerate as stated by the manufacturer or the sponsor, expressed as a percentage of the nominal width

NOTE The movement capability is usually the same over the entire range of the nominal widths.

3.4
nominal joint width
specified width of a joint seal, to be selected by the manufacturer or test sponsor