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Extended application of results from fire resistance tests for service installations - Part 4: Linear joint seals

Erweiterter Anwendungsbereich der Ergebnisse aus Feuerwiderstandsprüfungen für Installationen - Teil 4: Abdichtungssysteme für Bauteilfugen

Application étendue des résultats des essais de résistance au feu - Partie 4 : Calfeutrements de joints linéaires SIST EN 15882-4:2012 https://standards.iteh.ai/catalog/standards/sist/9e801048-196f-4421-8c21-

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ICS:

13.220.50	Požarna odpornost gradbenih materialov in elementov	Fire-resistance of building materials and elements
91.100.50	Veziva. Tesnilni materiali	Binders. Sealing materials

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Extended application of results from fire resistance tests for service installations - Part 4: Linear joint seals

Application étendue des résultats des essais de résistance au feu pour les installations de service - Partie 4 : Calfeutrements de joints linéaires Erweiterter Anwendungsbereich der Ergebnisse aus Feuerwiderstandsprüfungen für Installationen - Teil 4: Abdichtungssysteme für Bauteilfugen

This European Standard was approved by CEN on 30 March 2012.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 15882-4:2012) has been prepared by Technical Committee CEN/TC 127 "Fie 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 2012, and conflicting national standards shall be withdrawn at the latest by November 2012.

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.

EN 15882 consists of the following parts:

- EN 15882-1, Extended application of results from fire resistance tests for service installations Part 1: Ducts;
- prEN 15882-2, Extended application of results from fire resistance tests for service installations Part 2: Dampers;
- EN 15882-3, Extended applications of results from fire resistance tests for service installations Part 3: Penetration seals;
- EN 15882-4, Extended application of results from fire resistance tests for service installations Part 4: Linear joint seals.

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According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard. 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.

1 Scope

This European standard specifies rules and prescribes the methodology for the preparation of extended application reports for linear joint sealing systems tested in accordance with EN 1366-4. The field of the extended application reports is additional to the direct field of application given in EN 1366-4. It may be applied to or based on a single test, or a number of tests, which provide the relevant information for the formulation of an extended application.

Mechanical metal seals are not part of the scope of this European Standard.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 1363-2:1999, Fire resistance tests — Part 2: Alternative and additional procedures

EN 1366-4:2006+A1:2010, Fire resistance tests for service installations — Part 4: Linear joint seals

EN 13501-1:2007+A1:2009, Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire testseh STANDARD PREVIEW

EN 13501-2:2007+A1:2009, Fire classification of construction products and building elements — Part 2: Classification using data from fire resistance tests, excluding ventilation services

EN ISO 13943:2010, Fire safety — Vocabulary (180713943:2008)012 https://standards.iteh.ai/catalog/standards/sist/9e801048-196f-4421-8c21-6a9778eb343e/sist-en-15882-4-2012

3 Terms and definitions

For the purposes of this document the terms and definitions given in EN 1363-1:1999, EN 1363-2:1999, EN 1366-4:2006+A1:2010, EN 13501-1:2007+A1:2009, EN 13501-2:2007+A1:2009 and EN ISO 13943:2010, and the following apply:

3.1

fabric seal

seal comprised of a woven fabric, usually glass cloth or similar, which may be used in a combination with other material, such as metal facings, etc. to provide a composite seal

3.2

foam seal

seal made from a one, two or three component expanding foam (expands during application), applied in-situ

3.3

joint depth

overall distance between the exposed and unexposed faces across the thickness of the separating element

Note 1 to entry: See Figure 1.

3.4

joint face framing

additional substrate incorporated between the supporting construction and the joint seal

3.5

joint width

distance between the two adjacent faces of the building element(s)

Note 1 to entry: See Figure 1.

3.6

mineral wool seal

seal comprised mostly or entirely of glass, stone, slag or ceramic wool, which is either faced/coated or non-faced/coated

3.7

mortar seal

seal comprising a cementitious or gypsum based compound together with other filler materials, usually mixed on site with water to achieve the required workability

3.8

movement joint

joint between adjacent building elements or within a building element designed to accommodate a degree of movement greater than \pm 7,5% (such as deflection, thermal movement or seismic)

3.9

non-movement joint

joint between adjacent building elements or within a building element not designed to accommodate movement greater than \pm 7,5% (such as those designed to accommodate construction tolerances or irregularities of fit)

3.10

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seal depth (standards.iteh.ai) shortest distance between the exposed and unexposed surfaces of the seal

Note 1 to entry: See Figure 1.

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3.11 seal width

width of the seal in the non-installed condition (for uncompressed solid seals, see Figure 1, detail A) or the width of the installed seal where it is equal to or different from the joint width (e.g. overlap) (see Figure 1, details B and C)

3.12

sealant seal

seal formed from materials such as acrylics, silicone, oil-based products (mastic, putty), foamed in-situ, normally in conjunction with a backing material and inserted into the joint

3.13

strip seal

pre-formed seal normally inserted into the joint and held in place by friction or by means of an adhesive

Note 1 to entry: Strip seals may also include impregnated or multi component (composite, laminated) seals such as a combination of foam tape with strips of intumescent material.

3.14

surface mounted strip

surface mounted seal applied over the joint to completely cover and overlap the joint and usually mechanically fixed to the surface of the building element



- 5 Seal depth
 - Linear joint seal

Figure 1 — Description of seal depth, joint depth and joint width for different types of seals



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Key

Joint face framing

Figure 2 — Examples for a joint face framing

4 Extended application principles

4.1 General

Due to the diverse nature of materials and constructions used to seal linear joints or construction joints in fire resistant separating elements, it has been necessary to separate the extended application principles into generic seal types. Permitted variations may be used alone or in combination, unless stated otherwise. Principles common to all generic seal types are given in 4.2. Principles and guidance relating to each specific generic joint type are given in Annex A of this European Standard.

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Variables for each seal type which require consideration, are included in this report. These are as follows:

- separating element;
- joint width/seal width;

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joint depth/seal depth;

— seal position in relation to the exposed face;

- orientation (see EN 1366-4);
- whether the joint is a movement or non-movement joint.

Each sub-clause gives the possible variation and the rule relating to the variation.

The following rules are considered applicable to joint assemblies tested either with or without induced movement.

4.2 Principles common to all generic seal types

4.2.1 General

The rules given in the following sub-clauses are applicable to all generic linear joint seal types incorporated within Annex A, unless stated otherwise in the specific section.