

# **SLOVENSKI STANDARD**

## **oSIST prEN 15998:2019**

**01-april-2019**

---

### **Steklo v gradbeništvu - Varnost v primeru požara, požarna odpornost - Metodologija preskušanja stekla za namene klasificiranja**

Glass in building - Safety in case of fire, fire resistance - Glass testing methodology for the purpose of classification

Glas im Bauwesen - Brandsicherheit, Feuerwiderstandsfähigkeit - Verfahrensweise von Glasprüfungen zur Klassifizierung

Verre dans la construction - Sécurité en cas d'incendie, résistance au feu - Méthodologie d'essai du verre à des fins de classification

**Ta slovenski standard je istoveten z: prEN 15998**

---

#### **ICS:**

13.220.50	Požarna odpornost gradbenih materialov in elementov	Fire-resistance of building materials and elements
81.040.20	Steklo v gradbeništvu	Glass in building

**oSIST prEN 15998:2019**

**en,fr,de**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**DRAFT**  
**prEN 15998**

January 2019

ICS 13.220.50; 81.040.20

Will supersede EN 15998:2010

English Version

**Glass in building - Safety in case of fire, fire resistance -  
Glass testing methodology for the purpose of classification**

Verre dans la construction - Sécurité en cas d'incendie,  
résistance au feu - Méthodologie d'essai du verre à des  
fins de classification

Glas im Bauwesen - Brandsicherheit,  
Feuerwiderstandsfähigkeit - Verfahrensweise von  
Glasprüfungen zur Klassifizierung

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 129.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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.

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

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

**Warning :** This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

<b>Contents</b>	<b>Page</b>
European foreword.....	3
Introduction .....	4
<b>1 Scope .....</b>	<b>5</b>
<b>2 Normative references .....</b>	<b>5</b>
<b>3 Terms and definitions .....</b>	<b>6</b>
<b>4 Principles .....</b>	<b>9</b>
4.1 General .....	9
4.2 Testing to determine fire resistance as a product characteristic for a glass.....	9
4.3 Applicable fire resistance tests .....	9
4.4 Glass products .....	10
4.5 Classification report(s) .....	10
<b>5 Sampling.....</b>	<b>10</b>
5.1 General .....	10
5.1.1 General remark.....	10
5.1.2 Classification of a glass product.....	10
5.1.3 Market application testing.....	10
5.2 For determination of fire resistance as a product characteristic for a glass.....	10
5.2.1 Classification of a glass product.....	10
5.2.2 Market application testing.....	11
5.3 Non-sampled test results.....	12
5.3.1 General.....	12
5.3.2 Classification of a glass product.....	12
5.3.3 Market application .....	12
5.4 Pre-existing test data .....	12
<b>6 Use of test data for the extended field of application (EXAP) .....</b>	<b>12</b>
<b>Annex A (informative) List of possible glass product standards (see 4.5) .....</b>	<b>13</b>
A.1 Monolithic basic or special basic glasses.....	13
A.2 Monolithic thermally toughened glasses.....	13
A.3 Laminated and laminated safety glasses .....	13
A.4 Insulating glass units .....	13
A.5 Coated glass.....	13
<b>Annex B (informative) Market application testing .....</b>	<b>14</b>
<b>Bibliography.....</b>	<b>15</b>

## European foreword

This document (prEN 15998:2019) has been prepared by Technical Committee CEN/TC 129 “Glass in building”, the secretariat of which is held by NBN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 15998:2010.

The following main changes have been made in prEN 15998:2019 compared with edition EN 15998:2010:

- update of terms and definitions to be in line with the relevant standards in the area of fire safety in buildings;
- editorial updates.

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

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 15998:2020

<https://standards.iteh.ai/catalog/standards/sist/5e59ff31-873a-485b-8a32-09b19afd2d8d/sist-en-15998-2020>

## Introduction

According to mandate M/135 “Glass in building”, one of the essential characteristics that may be claimed is Safety in case of fire – Resistance to fire (for glass for use in a glazed assembly intended specifically for fire resistance). However, glass products cannot be tested and classified for fire resistance without being incorporated into a fire resistant glazed assembly.

iTeh STANDARD PREVIEW  
(standards.iteh.ai)

SIST EN 15998:2020

<https://standards.iteh.ai/catalog/standards/sist/5e59ff31-873a-485b-8a32-09b19afd2d8d/sist-en-15998-2020>

## 1 Scope

This document specifies the testing methodology to be used for glass products that are claiming fire resistance. The methodology covers Type Testing as defined in the relevant glass product standard.

NOTE This document provides guidance with the declaration of the characteristic, Safety in case of fire – Resistance to fire (for glass for use in a glazed assembly intended specifically for fire resistance) for the CE marking.

The same methodology can also be used to determine the performance classification for market applications (see Annex B).

The methodology covers all glass product types that may require testing and classification for fire resistance.

Fire resistance testing covers end use applications for example:

- doors;
- partitions, walls (including curtain walling);
- floors, roofs;
- ceilings.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1364-1, *Fire resistance tests for non-loadbearing elements — Part 1: Walls*

EN 1364-2, *Fire resistance tests for non-loadbearing elements — Part 2: Ceilings*

EN 1364-3, *Fire resistance tests for non-loadbearing elements — Part 3: Curtain walling — Full configuration (complete assembly)*

EN 1364-4, *Fire resistance tests for non-loadbearing elements — Part 4: Curtain walling — Part configuration*

EN 1365-1, *Fire resistance tests for loadbearing elements — Part 1: Walls*

EN 1365-2, *Fire resistance tests for loadbearing elements — Part 2: Floors and roofs*

EN 1634-1, *Fire resistance and smoke control tests for door, shutter and openable window assemblies and elements of building hardware — Part 1: Fire resistance tests for doors, shutters and openable windows*

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

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

#### 3.1

##### **extended field of application**

##### **EXAP**

outcome of a process (involving the application of defined rules that may incorporate calculation procedures) that predicts, for a variation of a product property and/or its intended end use application(s), a test result on the basis of one or more test result(s) to the same test standard

[SOURCE: EN 13501-2]

#### 3.2

##### **fire resistant glass**

glass product, (i.e. monolithic glass, laminated glass, insulating glass units), that when used in a glazed assembly, can have its performance determined and classified in accordance with EN 13501-2

Note 1 to entry: The term “insulating” when used as an insulating glass unit according to EN 1279-1, should not be confused with the term “insulation” used in EN 13501-2 classification standard for fire resistant glazed elements.

#### 3.3

##### **fire performance classification**

result of (a) fire resistance test(s) expressed as required in EN 13501-2

Note 1 to entry: The classification is reported with respect to integrity (E), integrity and radiation (EW), integrity and insulation (EI), and loadbearing capacity and integrity (RE) and loadbearing capacity, integrity and insulation (REI).

Note 2 to entry: The classification of a specific glass product will be one or more of E, EW, EI, RE, REI.

Note 3 to entry: The time obtained for different classifications may be different, e.g. EW 30, EI 20.

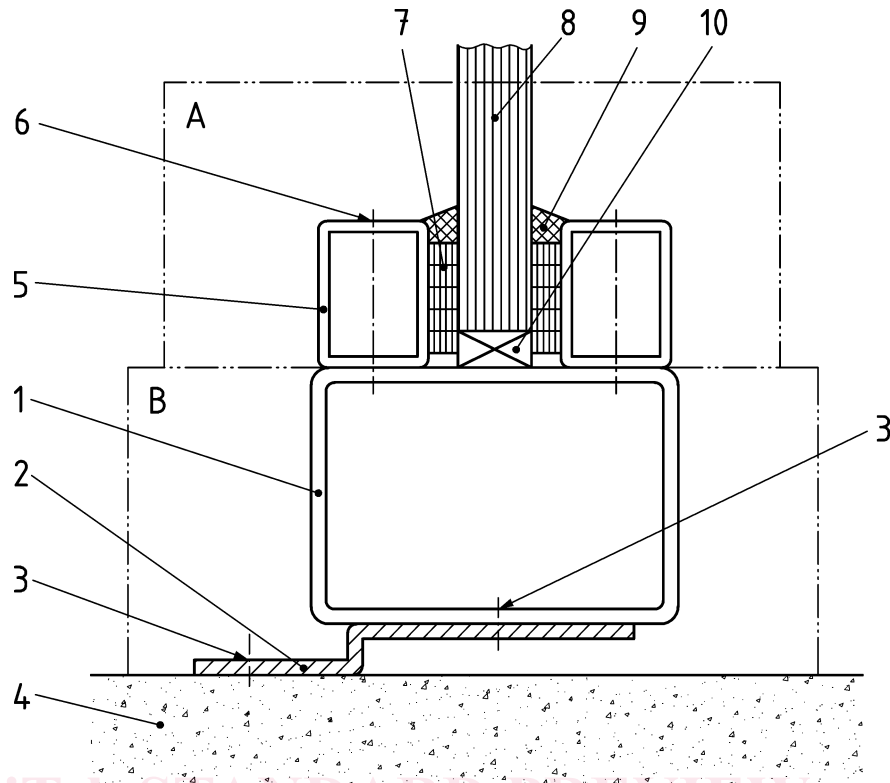
#### 3.4

##### **framing system**

frame profile and fixing to the supporting construction

Note 1 to entry: See Figure 1, B.





#### Key

- A glazing system
- B framing system
- 1 frame
- 2 metal anchor, screwed or bolted to the supporting construction (4) by a fixing anchor (3)
- 3 screw and fixing anchor
- 4 supporting construction
- 5 bead, screwed or clipped or clamped
- 6 bead fixing
- 7 glazing strip
- 8 glass
- 9 sealing or gasket
- 10 setting block

**Figure 1 — Fire resistant framing and glazing system**

### 3.5

#### glass product range

group of fire resistant glass (see 3.2) products, including products from one or more glass product families, e.g. monolithic glass, laminated glass, insulating glass units, defined and produced by one manufacturer for which the characteristic resistance to fire from any one product within the range is valid for all other products within this range

Note 1 to entry: The glass product families are defined in the relevant product standards.

**prEN 15998:2019 (E)****3.6****glazed assembly**

fire-resistant glass together with the framing system and glazing materials subjected to the fire resistance test

Note 1 to entry: Also referred to as glazed element, glazed construction, glazed screen.

Note 2 to entry: See Figure 1.

**3.7****glazing system material**

all materials used to glaze the fire resistant glass into its frame, e.g. glazing strips, beads and bead fixings, setting blocks, gaskets and sealant

Note 1 to entry: See Figure 1, A.

**3.8****glazing materials**

materials used to glaze the fire-resistant glass into its frame, e.g. glazing strips, beads and bead fixings, setting blocks, gaskets and sealant

**3.9****pre-existing test data**

test data generated by fire resistance tests that have been undertaken in accordance with former versions of European test standards

**3.10****Type Testing****TT**

determination of the performance of a product (characteristic, durability), on the basis of either actual tests or other procedures (such as conventional, standardized, tabulated or general accepted values, standardized or recognized calculation methods, test reports when made available, etc.), in accordance with this European standard that demonstrates compliance with this European standard

Note 1 to entry: The European standard referred to is the applicable product standard for the glass product under consideration, e.g. EN 1279-5; EN 12150-2; EN 13024-2; EN 14449.

**3.11****reference test**

fire resistance test in accordance with the appropriate standard (see 4.3), on which the extended application is based and the results of which are used as the main source of data for the extended application

**3.12****test report**

document that covers the results of tests undertaken on a representative sample of the product from production or on a prototype design of the product

**3.13****technical file**

document, produced and maintained by the manufacturer, that contains all relevant information dealing with product traceability/testing/manufacture, etc.