



**SLOVENSKI STANDARD**  
**oSIST prEN 13049:2022**

**01-april-2022**

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**Okna - Udarec z mehkim, težkim telesom - Preskusna metoda, varnostne zahteve in razvrščanje**

Windows - Soft and heavy body impact - Test method, safety requirements and classification

Fenster - Belastung mit einem weichen, schweren Stoßkörper - Prüfverfahren, Sicherheitsanforderungen und Klassifizierung

Fenêtres - Choc de corps mou ou lourd - Méthode d'essai, prescriptions de sécurité et classification

**Ta slovenski standard je istoveten z: prEN 13049**

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**ICS:**

91.060.50      Vrata in okna      Doors and windows

**oSIST prEN 13049:2022**      **en,fr,de**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**DRAFT**  
**prEN 13049**

February 2022

ICS 91.060.50

Will supersede EN 13049:2003

English Version

## Windows - Soft and heavy body impact - Test method, safety requirements and classification

Fenêtres - Choc de corps mou ou lourd - Méthode  
d'essai, prescriptions de sécurité et classification

Fenster - Belastung mit einem weichen, schweren  
Stoßkörper - Prüfverfahren, Sicherheitsanforderungen  
und Klassifizierung

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 33.

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.

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[oSIST prEN 13049:2022](http://osist.prEN.13049:2022)

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.

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

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

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## European foreword

This document (prEN 13049:2022) has been prepared by Technical Committee CEN/TC 33 “Doors, windows, shutters, building hardware and curtain walling”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 13049:2003.

This document is one of a series of standards for windows and doors.

The revision of this document clarifies the test method; furthermore it supplements the scope of the standard for pedestrian doors. It does not affect existing test evidence of EN 13049:2003.

In comparison with the previous edition, the following technical modifications have been made:

- clause 5: review and clarification of preparation of the test specimen;
- clause 6: supplement and clarification of testing procedures for windows in subclause 6.1 and pedestrian doorsets in subclause 6.2. Clarification of the responsibilities of the testing body;
- clause 7: supplement of necessary description of test specimen;
- introduction of a drop height for class 0 in Table 1.

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**prEN 13049:2021 (E)****1 Scope**

This document specifies the test method, safety requirements and classification when determining the effect on a window or pedestrian doorset impacted with a soft and heavy body. Any secondary moving sashes, casements, leaves, mullions, transoms, T-connectors or fixed lights which may be mounted internally to the main casements or sashes, shall also be similarly tested.

The test applies to all infill of whatever materials including glass. It is not intended to classify the strength of the glass when used as an infill. It is intended to assess the interactions between all components of a window or pedestrian doorset with particular regard to safety in use.

NOTE 1 The test method is aimed for glazed pedestrian doorsets with injury risk, but can also be used for other types of pedestrian doorsets if requested by the client.

NOTE 2 For the classification of glass see EN 12600. The test has been devised to suit all window or pedestrian doorset types, configurations and materials.

**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 1630, *Pedestrian doorsets, windows, curtain walling, grilles and shutters - Burglar resistance - Test method for the determination of resistance to manual burglary attempts*

EN 12519, *Windows and pedestrian doors - Terminology*

EN 12600, *Glass in building - Pendulum test - Impact test method and classification for flat glass*

**3 Terms and definitions**

For the purposes of this document, the terms and definitions given in EN 12519 apply.

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

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

**4 Apparatus**

The apparatus shall consist of a rigid surround frame into which the complete specimen can be mounted using the fixing system and devices provided by the manufacturer.

The impactor as specified in EN 12600 shall be mounted on a horizontal or vertical axis, as appropriate for the requirements of access to the impact point. In addition wires, pulleys, hooks and suitable height adjusting devices are needed, as specified in EN 12600.

## 5 Preparation of test specimen

Storage and testing shall be carried out in a non-destructive environment within the ranges of + 10 °C to + 30 °C and 25 % to 75 % relative humidity. The test specimen shall be conditioned in this environment for at least 4 h prior to starting the test.

The test specimen shall be fixed as intended for use in accordance with the manufacturer's instructions without any twist or bends which may influence the test results. The test specimen shall be fully operable. The stiffness of the test rig and the fixing of the test specimen to it shall be sufficient to avoid adverse effects on the performance of the test specimen during testing.

The test specimen shall be brought into the defined closing condition in accordance with the manufacturer's requirements.

The test specimen shall be provided with the representative glazing bead profile with infill to fit, if applicable.

## 6 Test procedures for windows and pedestrian doorsets

Operate any openable parts of the test specimen five times immediately before testing.

Tests shall be performed separately, one impact on each test specimen. Select, e.g. by means of pre-tests or calculations, the most dangerous impact point to strike typically one or more of the following:

- the centre of the infill/panel;
- a corner of the infill/panel;
- the centre of the longest edge of the largest area of the infill/panel;
- the centre of the shortest edge of the smallest area of the infill/panel;
- the centre width of glazing bar;
- the centre width of transom;
- the centre of mullion between fixings;
- the centre width of midrail and/or bottom rail;
- the centre of the longest edge of the stile.

The direction (opening face or closing face) of impact shall be as specified by the client.

It is possible to perform several tests on one test specimen. Damage from previous tests can be repaired by the client. If this is not possible, the test shall be performed on a separate test specimen.

In case of more than one infill, each infill may be assessed.

With the impactor hanging in its free state, adjacent to the impact point, attach the release hook to it. Raise the impactor, by means of the height adjusting device until the drop height is correctly set, as judged from a reference point on the impactor.

Disengage the release hook allowing the impactor to swing freely until it strikes the test specimen perpendicular to the impact point.

The drop height shall be set to an accuracy of  $\pm 10$  mm.