



SLOVENSKI STANDARD

oSIST prEN 13116:2022

01-december-2022

Obešene fasade - Odpornost proti obremenitvi z vetrom - Zahtevane lastnosti

Curtain walling - Resistance to wind load - Performance requirements

Vorhangfassaden - Widerstand gegen Windlast - Leistungsanforderungen

Façade rideaux - Résistance structurelle au vent - Prescriptions de performance

Ta slovenski standard je istoveten z: **prEN 13116**

<https://standards.iteh.ai/catalog/standards/sist/d04ad9e9-f287-451f-8eec-2b2caf73b2d7/osist-pren-13116-2022>

ICS:

91.060.10	Stene. Predelne stene. Fasade	Walls. Partitions. Facades
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 13116

October 2022

ICS 91.060.10

Will supersede EN 13116:2001

English Version

Curtain walling - Resistance to wind load - Performance requirements

Façade rideaux - Résistance structurelle au vent -
Prescriptions de performance

Vorhangfassaden - Widerstand gegen Windlast -
Leistungsanforderungen

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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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 13116:2022) 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 13116:2001.

This document forms part of a series of European Standards dedicated to curtain walling products as defined in the curtain walling product standard EN 13830.

This document complements a series of curtain walling standards for performance requirements and methods of test as defined in the product standard EN 13830.

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

- Normative references updated;
- Alignment of the deflection limits in accordance with EN 13830.

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prEN 13116:2022 (E)

1 Scope

This document specifies the structural performance requirements of curtain walling under wind load, both its fixed and openable parts, under positive and negative static air pressure.

This document applies to any curtain walling product as defined in EN 13830.

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 12152, *Curtain walling - Air permeability - Performance requirements and classification*

EN 12179, *Curtain walling - Resistance to wind load - Test method*

EN 13830, *Curtain walling - Product standard*

EN 1991-1-4, *Eurocode 1: Actions on structures - Part 1-4: General actions - Wind actions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12152 and the following apply.

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

— ISO Online browsing platform: available at <https://www.iso.org/obp>

— IEC Electropedia: available at <https://www.electropedia.org/>

3.1 test pressure

differential pressure between the two faces of the test specimen, expressed in Pascals (Pa)

3.2 positive pressure

when outer face is subjected to higher pressure than inner face

3.3 negative pressure

when inner face is subjected to higher pressure than outer face

3.4 design wind load

load calculated following the procedure specified within Eurocode EN 1991-1-4 and represented in this test with positive and negative test pressures on the test specimen

3.5 increased load safety load

1,5 times design wind load expressed in Pascals

3.6**residual deformation**

change in shape or dimension which does not disappear when the test pressure is removed

3.7**frontal displacement**

movement of a point on a member measured normal to the member

3.8**frontal deflection**

maximum frontal displacement of a member, minus half the sum of the frontal displacement at each end of the member

4 Requirements**4.1 Generalities**

The curtain wall shall safely transmit the design load via the points of support back to the building structure.

The curtain wall shall be capable of accommodating the design load without any reduction in the specified performance requirements, except as specified in 4.2, last sentence.

4.2 Performance under design load

The frontal deflection, under positive and negative design loads, the maximum frontal deflection (d) of the curtain walling's framing members shall not exceed the following limits:

— $d \leq L / 200$, if $L \leq 3000$ mm;

— $d \leq 5 \text{ mm} + L / 300$, if $3000 \text{ mm} < L < 7500$ mm;

— $d \leq L / 250$, if $L \geq 7500$ mm

when measured between the points of support or anchorage to the building's structure (L).

The frontal deflection shall be temporary deformation only, and shall recover after the removal of load by a minimum of 95 % within a time period of 1 h.

Frontal displacement of fixings of framing members at their connections to the building structure or other structural components shall be limited to less than 1 mm and this shall be allowed as residual deformation.

As this displacement is allowed under both positive and negative design loads, then the limit shall be taken from an assessed neutral position.

The positive difference between the air permeability measured at maximum pressure in the first and second tests, should not differ by more than $0,3 \text{ m}^3/\text{h}\cdot\text{m}^2$ ($0,1 \text{ m}^3/\text{h}\cdot\text{m}$ length of joint).

4.3 Performance under increased load

Under both positive and negative increased load no permanent damage shall occur to framing members, infill panels, opening units, fasteners or anchors.

Panels, glazing beads and decorative capping pieces shall remain securely held and gaskets shall not be displaced.