



SLOVENSKI STANDARD

SIST EN 12210:2016

01-maj-2016

Nadomešča:

SIST EN 12210:2000

SIST EN 12210:2000/AC:2003

Okna in vrata - Odpornost proti obremenitvam z vetrom - Klasifikacija

Windows and doors - Resistance to wind load - Classification

Fenster und Türen - Widerstandsfähigkeit bei Windlast - Klassifizierung

Fenêtres et portes - Résistance au vent - Classification

Ta slovenski standard je istoveten z: **EN 12210:2016**

ICS:

91.060.50 Vrata in okna

Doors and windows

SIST EN 12210:2016

en,fr,de

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EUROPEAN STANDARD

EN 12210

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2016

ICS 91.060.50

Supersedes EN 12210:1999

English Version

Windows and doors - Resistance to wind load - Classification

Fenêtres et portes - Résistance au vent - Classification

Fenster und Türen - Widerstandsfähigkeit bei Windlast
- Klassifizierung

This European Standard was approved by CEN on 9 January 2016.

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.

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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

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European foreword

This document (EN 12210:2016) 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 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 September 2016, and conflicting national standards shall be withdrawn at the latest by September 2016.

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.

This document supersedes EN 12210:1999.

The revision of this European Standard clarifies only the classification and does not affect existing evidence of EN 12210.

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

In comparison with EN 12210:1999, the following significant changes were made:

- a) Clause 4: Class 0 deleted;
- b) Sub-clause 6.1 inserted;
- c) Sub-clause 6.2: Revision of the whole paragraph: Guidance NB-CPD/SG06/11/079 from Group of Notified Bodies for the Construction Products Directive 89/106/EEC included.

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, Former Yugoslav Republic of Macedonia, 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.

EN 12210:2016 (E)

1 Scope

This European Standard defines the classification of test results for completely assembled windows and doors of any materials after testing in accordance with EN 12211.

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 referenced, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1026, *Windows and doors — Air permeability — Test method*

EN 12207, *Windows and doors — Air permeability — Classification*

EN 12211, *Windows and doors — Resistance to wind load — Test method*

EN 12519, *Windows and pedestrian doors — Terminology*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12519 and EN 12211 apply.

4 Classification

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EN 12211 describes a method of test to determine the limits (P1, P2 and P3) for the test specimen. These limits are expressed in Pascals (Pa). The relationships between the limits are:

— $P2 = 0,5 P1$;

— $P3 = 1,5 P1$.

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Classification shall be according to the results of wind resistance tests to positive and negative test pressures. Test pressures are given in Table 1.

NOTE This classification can be used with other relevant standards or codes of practice and can thus be used to provide correlation with actual exposure requirements.

Table 1 — Classification of wind load

Class	P1 Pa	P2 ^a Pa	P3 Pa
1	400	200	600
2	800	400	1200
3	1200	600	1800
4	1600	800	2400
5	2000	1000	3000
E xxxx ^b	xxxx		

^a This pressure having been repeated 50 times.

^b Test specimen tested with wind loading above class 5, where xxxx is the actual test pressure P1 expressed in Pa (e.g. 2350).

5 Classification of relative frontal deflection

The relative frontal deflection of the most deforming framing member of the test specimen measured at test pressure P1 shall be classified as in Table 2.

Table 2 — Classification of relative frontal deflection

Class	Relative frontal deflection
A	$\leq 1/150$
B	$\leq 1/200$
C	$\leq 1/300$

6 Requirements

6.1 General

The following requirements shall also be met in order that the product can be classified.

6.2 Due to wind pressure P1 and P2

No visible failures (e.g. opening of the test specimen, loosening of the sash/casement or leaf, separation of hardware or glazing beads) when viewed by normal or corrected vision at a distance of 1 m in natural and/or artificial light.

The test specimen shall remain functional and the air permeability after tests P1 and P2 shall not exceed the upper limits of the claimed air permeability class as specified in EN 12207 by more than 20 %.

The claimed air permeability class can be determined by means of the air permeability test preceding the wind load test. Before the resistance to wind load test according to EN 12211, the air permeability test according to EN 1026 shall be completed. The results of the air permeability test determine the initial classification. When the air permeability is measured again after the wind loads P1 and P2 have been applied, the measured values for the repeated air permeability test shall not exceed the upper limits of the class for the air permeability claimed by the manufacturer by more than 20 % (following the previous classification rules used). However, if the upper limits of the class determined by the initial classification are exceeded by more than 20 %, the manufacturer may claim a lower air permeability class than that achieved in the initial classification. In these circumstances, the report shall state that if the manufacturer wishes to claim a class for the air permeability for the product, combined with a class for resistance to wind load, only the air permeability class achieved in combination with the wind load test may be claimed.

6.3 Due to wind pressure P3

Failures such as bending and/or twisting of any building hardware and splitting or cracking of framing members shall be permitted provided that no parts become detached and the test specimen remains closed. However if glass breaks it is permitted for it to be replaced and the test to be repeated once more.

If building hardware bends, twists or breaks leading to a failure (e.g. opening of the test specimen, loosening of the sash/casement or leaf, separation of hardware or glazing beads), the defective part may be replaced, but the full test has to be repeated.

7 Classification for resistance to wind load

Wind loads and relative frontal deflection shall be combined into one overall classification as indicated in Table 3.

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Only the highest test deflection obtained from testing with positive and negative pressure at each pressure step requested by the manufacturer shall be used for overall classification. Therefore it is not permissible to take an average of the different results obtained from testing with positive and negative pressure.

Table 3 — Resistance to wind load — Classification

Wind load class	Relative frontal deflection		
	A	B	C
1	A1	B1	C1
2	A2	B2	C2
3	A3	B3	C3
4	A4	B4	C4
5	A5	B5	C5
Exxxx	AExxxx	BExxxx	CExxxx

NOTE In the resistance to wind load classification, the letter refers to the relative frontal deflection, see Table 2, and the number to the wind load class, see Table 1.

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