



SLOVENSKI STANDARD
oSIST prEN 14351-2:2009
01-julij-2009

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Windows and doors - Product standard, performance characteristics - Part 2: Internal pedestrian doorsets without resistance to fire and/or smoke leakage characteristics

Fenster und Türen - Produktnorm, Leistungseigenschaften - Teil 2: Innentüren ohne
Feuerschutz- und/oder Rauchdichteigenschaften

Portes et fenêtres - Norme produit, caractéristiques de performances - Partie 2 : Blocs
portes intérieurs pour piétons sans caractéristiques de résistance au feu et/ou
dégagement de fumée

Ta slovenski standard je istoveten z: prEN 14351-2

ICS:

91.060.50 Vrata in okna Doors and windows

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 14351-2

April 2009

ICS

English Version

Windows and doors - Product standard, performance characteristics - Part 2: Internal pedestrian doorsets without resistance to fire and/or smoke leakage characteristics

Portes et fenêtres - Norme produit, caractéristiques de performances - Partie 2 : Blocs portes intérieurs pour piétons sans caractéristiques de résistance au feu et/ou dégagement de fumée

Fenster und Türen - Produktnorm, Leistungseigenschaften - Teil 2: Innentüren ohne Feuerschutz- und/oder Rauchdichtheitseigenschaften

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.

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COMITÉ EUROPÉEN DE NORMALISATION
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Contents

Page

Foreword.....	4
1 Scope	5
2 Normative references	5
2.1 Classification standards	5
2.2 Test and calculation standards	6
2.3 Other standards	7
3 Terms and definitions	7
4 Performance characteristics and special requirements	8
4.1 General	8
4.2 Dangerous substances	8
4.3 Impact resistance	8
4.4 Height and width of doorsets	9
4.5 Ability to release	9
4.6 Acoustic performance	9
4.7 Thermal transmittance	9
4.8 Air permeability	10
4.9 Durability	10
4.10 Operating forces	10
4.11 Mechanical strength	10
4.12 Ventilation	10
4.13 Bullet resistance	11
4.14 Explosion resistance	11
4.15 Resistance to repeated opening and closing	11
4.16 Behaviour between two different climates	11
4.17 Burglar resistance	11
4.18 Special requirements	12
5 Classification and designation	12
5 Handling, installation, maintenance and care	14
6 Evaluation of conformity	15
6.1 General	15
6.2 Initial Type Testing (ITT)	15
6.3 Factory production control (FPC)	18
6.4 Initial inspection of factory and FPC	20
6.5 Testing of samples taken at the factory in accordance with a prescribed plan	21
7 Labelling and packaging	21
Annex A (informative) Interdependence between characteristics and component	22
A.1 General	22
Annex B (normative) Determination of characteristics	24
B.1 Characteristics of internal pedestrian doorsets	24
B.2 Sound insulation of pedestrian doorsets	26
B.3 Thermal transmittance for pedestrian doorsets U_D in accordance to constructive details	27
Annex C (informative) Example of performance and requirement profile of an internal doorsets	30
Annex ZA (informative) Clauses of this European Standard addressing the provisions of the EU Construction Products Directive	31
ZA.1 Scope and relevant characteristics	31
ZA.2 Procedure(s) for the attestation of conformity of products	33

ZA.3 CE marking and labelling.....38
Bibliography.....41

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[oSIST prEN 14351-2:2009](https://standards.iteh.ai/catalog/standards/sist/855bc2cd-6d68-4137-a21d-a908426a4810/osist-pren-14351-2-2009)
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Foreword

This document (prEN 14351-2:2009) 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 European Standard is one of a series of standards for windows and pedestrian doorsets (see Figure 1).

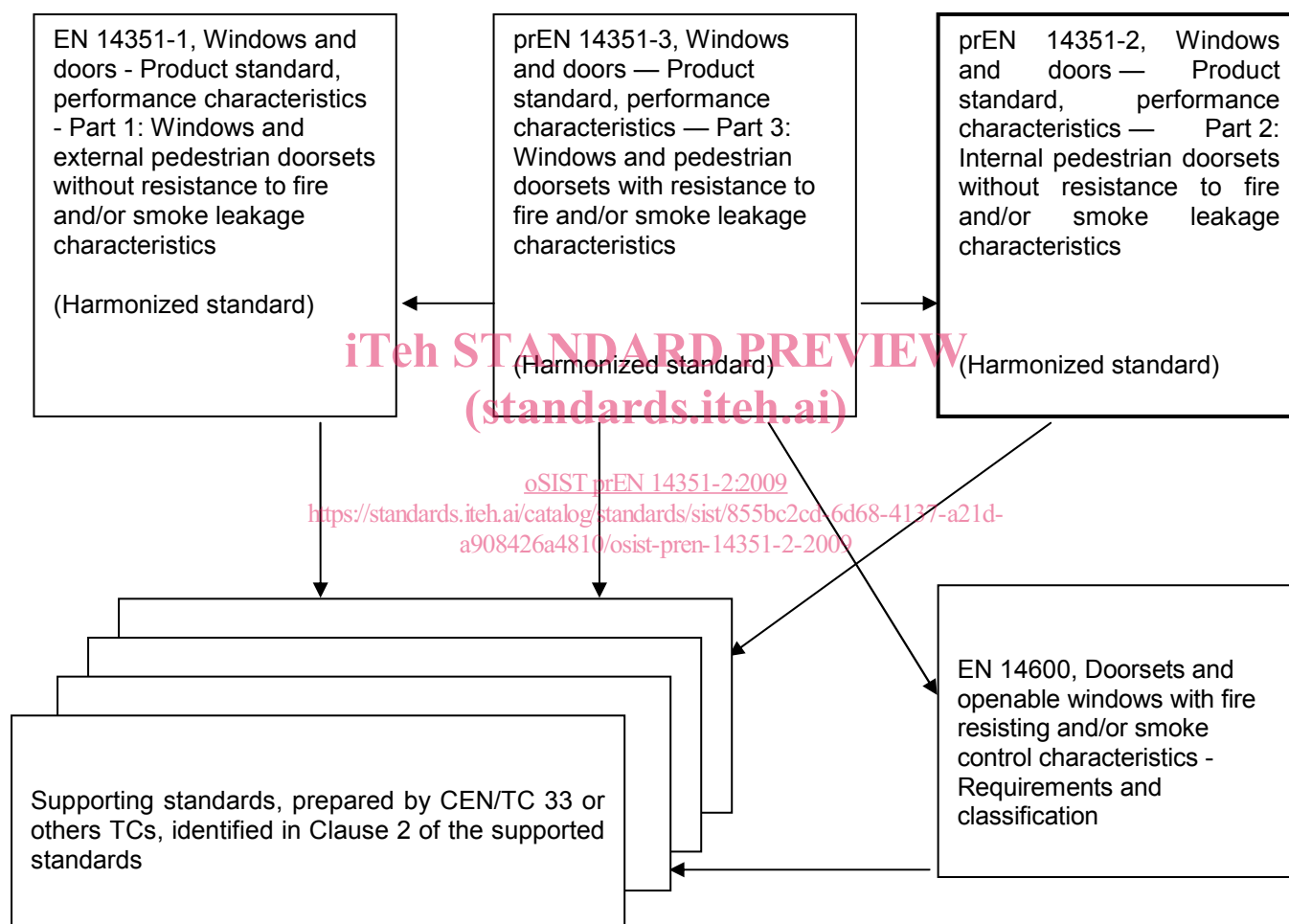


Figure 1 — Relationship between various standards

1 Scope

This European Standard identifies material independent performance characteristics that are applicable to internal pedestrian doorsets.

This document applies to:

- Manually internal pedestrian doorsets and screens with flush or panelled leaves, complete with:
 - related hardware,
 - integral fanlights, if any,
 - adjacent parts that are contained within a single frame for inclusion in a single aperture, if any.

The products covered by this document are not assessed for structural applications.

This document does not apply to:

- Internal pedestrian doorsets subject to regulations on smoke leakage and resistance to fire according to prEN 14351-3 but individual characteristics and performance requirements given in clause 4 can be relevant for these internal doors (see prEN 14351-3);
- industrial, commercial and garage doors and gates according to EN 13241-1 and prEN 13241-2;
- external pedestrian doorsets according to EN 14351-1;
- revolving internal pedestrian doorsets,
- door leaves placed on the market separately.

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2 Normative references

The following referenced documents are indispensable for the application 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.

2.1 Classification standards

EN 1192, *Doors — Classification of strength requirements*

EN 1522, *Windows, doors, shutters and blinds — Bullet resistance — Requirements and classification*

prEN 1627, *Pedestrian doorsets, windows, curtain walling, grilles and shutters — Burglar resistance — Requirements and classification*

EN 12207:1999, *Windows and doors — Air permeability — Classification*

EN 12217, *Doors — Operating forces — Requirements and classification*

EN 12219, *Doors — Climatic influences — Requirements and classification*

EN 12400, *Windows and pedestrian doors — Mechanical durability — Requirements and classification*

EN 13049, *Windows — Soft and heavy body impact — Test method, safety requirements and classification*

prEN 14351-2:2009 (E)

EN 13123-1, *Windows, doors and shutters — Explosion resistance — Requirements and classification — Part 1: Shock tube*

EN 13123-2, *Windows, doors and shutters — Explosion resistance — Test method — Part 2: Range test*

2.2 Test and calculation standards

EN 179, *Building hardware — Emergency exit devices operated by a lever handle or push pad — Requirements and test method.*

EN 947, *Hinged or pivoted doors — Determination of the resistance to vertical load*

EN 948, *Hinged or pivoted doors — Determination of the resistance to static torsion*

EN 949, *Windows and curtain walling, doors, blinds and shutters — Determination of the resistance to soft and heavy body impact for doors*

EN 950, *Door leaves — Determination of the resistance to hard body impact*

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

EN 1121, *Doors — Behaviour between two different climates — Test method*

EN 1125, *Building hardware — Panic exit devices operated by a horizontal bar for use in escape routes — Requirements and test methods*

EN 1191, *Windows and doors — Resistance to repeated opening and closing — Test method*

EN 1523, *Windows, doors, shutters and blinds — Bullet resistance — Test method*

prEN 1628, *Pedestrian doorsets, windows, curtain walling, grilles and shutters — Burglar resistance — Test method for the determination of resistance under static loading*

prEN 1629, *Pedestrian doorsets, windows, curtain walling, grilles and shutters — Burglar resistance — Test method for the determination of resistance under dynamic loading*

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

EN 1935, *Building hardware — Single-axis hinges — Requirements and test methods*

EN 12046-2, *Operating forces — Test method — Part 2: Doors*

EN 13124-1, *Windows, doors and shutters — Explosion resistance — Test method — Part 1: Shock tube*

EN 13124-2, *Windows, doors and shutters — Explosion resistance — Test method — Part 2: Range test*

EN 13141-1:2004, *Ventilation for buildings — Performance testing of components/products for residential ventilation — Part 1: Externally and internally mounted air transfer devices*

prEN 13633, *Building hardware — Electrically controlled panic exit systems, for use on escape routes — Requirements and test methods*

prEN 13637, *Building hardware — Electrically controlled emergency exit systems, for use on escape routes — Requirements and test methods*

EN ISO 140-3, *Acoustics — Measurement of sound insulation in buildings and of building elements — Part 3: Laboratory measurements of airborne sound insulation of building elements (ISO 140-3:1995)*

EN ISO 717-1, *Acoustics — Rating of sound insulation in buildings and of building elements — Part 1: Airborne sound insulation (ISO 717-1:1996)*

EN ISO 10077-1:2000, *Thermal performance of windows, doors and shutters — Calculation of thermal transmittance — Part 1: Simplified method (ISO 10077-1:2000)*

EN ISO 10077-2:2003, *Thermal performance of windows, doors and shutters — Calculation of thermal transmittance — Part 2: Numerical method for frames (ISO 10077-2:2003)*

EN ISO 12567-1, *Thermal resistance of windows and doors — Determination of thermal transmittance by hot box method — Part 1: Complete windows and doors (ISO 12567-1:2000)*

2.3 Other standards

EN 12150-2, *Glass in building — Thermally toughened soda lime silicate safety glass — Part 2: Evaluation of conformity/product standard*

EN 12519:2004, *Windows and doors — Terminology*

EN 1863, *Glass in building — Heat strengthened soda lime silicate glass — Part 2: Evaluation of conformity/product standard*

EN 14179-2, *Glass in building — Heat soaked thermally toughened soda lime silicate safety glass — Part 2: Evaluation of conformity/product standard*

EN 14321-2, *Glass in building — Thermally toughened alkaline earth silicate safety glass — Part 2: Evaluation of conformity/product standard*

EN 14351-1, *Windows and doors — Product standard, performance characteristics — Part 1: Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics*

EN 14449, *Glass in building — Laminated glass and laminated safety glass — Evaluation of conformity/Product standard*

EN ISO 12543-2, *Glass in building — Laminated glass and laminated safety glass — Part 2: Laminated safety glass (ISO/DIS 12543-2:2008)*

ISO 1000:1992, *SI units and recommendations for the use of their multiples and of certain other units*

3 Terms and definitions

For the purposes of this document, units and symbols given in ISO 1000:1992 apply and terms and definitions given in EN 14351-1, prEN 14351-3 and EN 12519 apply together with the following.

3.1

internal pedestrian doorset

doorset which is not designed to separate the internal climate from the external climate of a construction and for which the main intended use is the passage of pedestrians. Pedestrian door assemblies designed for internal communication including entry into dwellings and fulfilling the provisions of this document under the responsibility of one identified manufacturer are considered to be internal pedestrian doorsets

3.2

overall area

frame width x frame height

[EN 12519:2004, 3.4]

prEN 14351-2:2009 (E)**3.3****screen**

assembly of two or more internal pedestrian doorsets in one plane with or without separate frames

3.4**similar design**

modification by the replacement of components (e.g. glazing, hardware, weather stripping), and/or a change of material specification and/or dimensional change of profile section and/or methods and means of assembly which will not change the classification and/or declared value of a performance characteristic

NOTE Certain modifications can cause more favourable values for one or more characteristics, but also more unfavourable values for other characteristics (see Annex A).

3.5**unframed glass doorset**

doorset where the leaf (leaves) is (are) made of glass (single or insulating glass unit) and without any load bearing or load transferring framework

3.6**adjacent part**

any part of a doorset, other than the door leaf (leaves), including outer frame, side panels, and over panels.

4 Performance characteristics and special requirements**4.1 General**

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The performance characteristics for internal pedestrian doorsets shall be determined and expressed in accordance with 4.2 to 4.18.

oSIST prEN 14351-2:2009

NOTE 1 Not all these characteristics are applicable to every product or every intended end use situation. Where characteristics are required this document identifies the means of determination and the ways to express the results as well as the evaluation of conformity.

NOTE 2 The order in which the performance characteristics are identified does not imply an order of priority or a test sequence.

NOTE 3 Special requirements for certain products, see 4.18.

4.2 Dangerous substances

Insofar as the state of the art permits, the manufacturer shall establish those materials in the product which are liable to emission or migration during normal intended use and for which emission or migration into the environment is potentially dangerous to hygiene, health or the environment. The manufacturer shall establish and make the appropriate declaration of content according to the legal requirements in the intended state of destination.

NOTE 1 A list is available on the European Commission's web site (see Note 2 in ZA.1 of each of the harmonized product EN)

NOTE 2 For requirements on wood based panels see EN 13986.

4.3 Impact resistance

Internal pedestrian doorsets fitted with glass or other fragmental material shall be tested and the results shall be expressed in accordance with EN 13049. Where relevant, the test shall be carried out from both sides.

In cases where safe breaking of glass is required, safety glass according to EN 12150-2, EN 14449 or EN 14179-2 shall be used.

4.4 Height and width of doorsets

The clear opening height and width of internal pedestrian doorsets shall be expressed in mm.

The manufacturer shall also declare his tolerances (\pm in mm) for the height and width.

Where the threshold and the head/transom are not parallel, the maximum and minimum height shall be stated.

For double leaf doorsets, the clear opening width shall be expressed using the clear opening width of the primary leaf width and the total clear opening width.

NOTE 1 The clear opening height and width can be calculated taking into account the clear opening of the frame and the projecting hardware and angle of opening.

NOTE 2 The effective clear opening in use can be influenced by the installation of the product.

4.5 Ability to release

Single axis hinges, emergency exit devices and panic devices (mechanical or electrically controlled) installed on internal pedestrian doorsets in escape routes shall comply with EN 1935, EN 179, EN 1125, prEN 13633 or prEN 13637.

Doorsets intended for escape routes shall be identified as such with the appropriate class according to Table 1 and shall be functional with all the devices installed.

4.6 Acoustic performance

The sound insulation shall be determined in accordance with EN ISO 140-3 (reference method) or specific door types in accordance with Annex B, Table B.2.

The test results shall be evaluated in accordance with EN ISO 717-1.

4.7 Thermal transmittance

The thermal transmittances for internal pedestrian doorsets shall be determined for the relevant situation by using:

— Table B.3 (Annex B)

or by calculation using :

— EN ISO 10077-1 or by hot box method using :

— EN ISO 12567-1

as appropriate.

EN ISO 12567-1 shall be used as reference method.

The collective symbol for thermal transmittance is U_D for doorsets, i.e. the symbol U_{st} used in EN ISO 12567-1 shall be equivalent to U_D .

prEN 14351-2:2009 (E)**4.8 Air permeability**

Two air permeability tests shall be carried out in accordance with EN 1026, one with positive test pressures and one with negative test pressures.

The tests for air permeability of screens shall be carried out on the screen or on its individual parts including joints between the individual parts. In the latter case the air permeability of the screen shall be calculated as the sum of the air permeability of the individual parts and the joints.

The test result is defined as 2 values for air permeability, one with positive pressure and one with negative pressure expressed in accordance with EN 12207:1999, 4.6.

4.9 Durability**4.9.1 General**

The manufacturer shall declare the material(s) from which the product is manufactured including any applied coating and/or protection. This shall apply to all components that have an effect on the durability of the product in intended use except those components that comply with individual product standards (hardware, weather stripping). Where possible this shall be done by reference to European Standards.

By means of adequate choice of materials (including coatings, preservations and composition), components and assembly methods, the manufacturer shall ensure the durability of his product(s) for an economically reasonable working life taking into account his published maintenance recommendations.

NOTE The durability of internal pedestrian doorsets depends on the long-term performance of the individual components and materials as well as the assembly of the product and its maintenance. Specifications and classifications for individual materials and/or components are to be found in their respective material and component standards.

4.9.2 Durability of certain characteristics [oSIST prEN 14351-2:2009](https://standards.iteh.ai/catalog/standards/sist/855bc2cd-6d68-4137-a21d-2116426c4819/iso-14351-2-2009)
<https://standards.iteh.ai/catalog/standards/sist/855bc2cd-6d68-4137-a21d-2116426c4819/iso-14351-2-2009>

The durability of certain characteristics shall be ensured as follows:

Ability to release only for closed doorsets in escape routes: The durability of this characteristic shall be ensured by compliance with 4.5.

4.10 Operating forces

Manually operated internal pedestrian doorsets shall be tested in accordance with EN 12046-2. The results shall be expressed in accordance with EN 12217.

NOTE Doorsets with self closing devices or emergency exit devices are excluded from the scope of EN 12046-2.

4.11 Mechanical strength

Internal pedestrian doorsets shall be tested in accordance with EN 947, EN 948, EN 949 and EN 950.

The results shall be expressed in accordance with EN 1192.

4.12 Ventilation

Air transfer devices integrated in an internal pedestrian doorset shall be tested and evaluated in accordance with EN 13141-1, 5.1. For the purpose of testing, joints and openings not subject to testing shall be taped over.

The results shall include:

- The air flow characteristics (K) and flow exponent (n);
- The air flow rate at (4, 8, 10 and 20) Pa pressure difference,

NOTE 1 Additional pressure differences may be stated.

The volume air flow rate q_v shall be determined as follows:

$$q_v = K (\Delta p)^n$$

where

K is the air flow characteristic of the device;

n is the flow exponent;

Δp is the pressure difference.

NOTE 2 Individual devices, designated to be installed in an internal pedestrian doorset at a later date, are not covered by this document.

4.13 Bullet resistance

After testing in accordance with EN 1523 the bullet resistant characteristics of internal pedestrian doorsets shall be expressed in accordance with EN 1522.

4.14 Explosion resistance (standards.iteh.ai)

4.14.1 Shock tube

[oSIST prEN 14351-2:2009](https://standards.iteh.ai/catalog/standards/sist/855bc2cd-6d68-4137-a21d-88312431074e/en-13124-1-2012-explosion-resistance)

[https://standards.iteh.ai/catalog/standards/sist/855bc2cd-6d68-4137-a21d-](https://standards.iteh.ai/catalog/standards/sist/855bc2cd-6d68-4137-a21d-88312431074e/en-13124-1-2012-explosion-resistance)

After testing in accordance with EN 13124-1, the explosion resistance characteristics of internal pedestrian doorsets shall be expressed in accordance with EN 13123-1.

4.14.2 Range tube

After testing in accordance with EN 13124-2 the explosion resistance characteristics of internal pedestrian doorsets shall be expressed in accordance with EN 13123-2.

4.15 Resistance to repeated opening and closing

A repeated opening and closing test shall be carried out in accordance with EN 1191. The results shall be expressed in accordance with EN 12400.

4.16 Behaviour between two different climates

A climate test on internal pedestrian doorsets shall be carried out in accordance with EN 1121, the results shall be expressed in accordance with EN 12219. The mean value of the results according to EN 1121 shall be used as the basis for the classification according to EN 12219, provided that no one value shall be in excess of 25% of the classification limit. Otherwise the worst test result according to EN 1121 shall be used as the basis for classification.

4.17 Burglar resistance

After testing in accordance with prEN 1628, prEN 1629 and prEN 1630 the results shall be expressed in accordance with prEN 1627.