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Okna in vrata - Standard za proizvod, zahtevane lastnosti - 2. del: Notranja vrata

Windows and doors - Product standard, performance characteristics - Part 2: Internal pedestrian doorsets

Fenster und Türen - Produktnorm, Leistungseigenschaften - Teil 2: Innentüren

Portes et fenêtres - Norme produit, caractéristiques de performances - Partie 2: Blocs-portes intérieurs pour piétons

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Windows and doors - Product standard, performance characteristics - Part 2: Internal pedestrian doorsets

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COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 14351-2:2018) 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of an identical text or by endorsement, at the latest by May 2019, and conflicting national standards shall be withdrawn at the latest by August 2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a standardisation request given to CEN by the European Commission and the European Free Trade Association, and supports Basic Work Requirements of EU Regulation and Essential Requirements of EU Directive(s).

For relationship with EU Regulation/Directive(s), see informative Annex ZA, which is an integral part of this document.

This European Standard is one of a series of standards for windows and pedestrian doorsets (see Figure 1).

1) EN 14351-2 alone, applies to all internal pedestrian doorsets.

2) For the internal pedestrian doorsets having fire resisting and/or smoke control characteristics, EN 16034 should apply in conjunction with EN 14351-2.

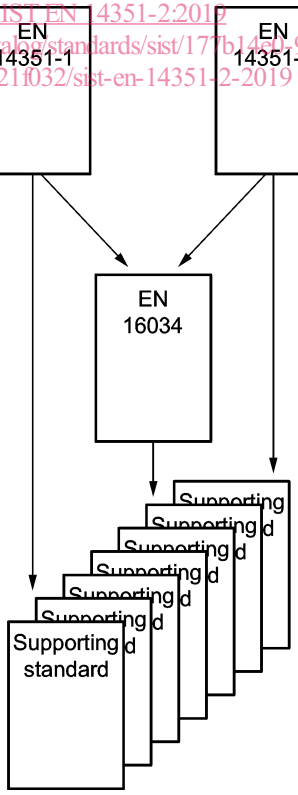


Figure 1 — Relationship between various standards

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard identifies material independent performance characteristics, except resistance to fire and smoke control characteristics, which are applicable to internal pedestrian doorsets.

Fire resisting and/or smoke control characteristics for pedestrian doorsets and openable windows are covered by EN 16034.

This European Standard applies to doorsets intended to be used internally for construction works as:

— intended use a) in escape routes;

— intended use b) for specific uses with specific requirements;

— intended use c) for communication only.

NOTE 1 These above intended uses can be combined, for example escape routes with specific requirements.

For internal pedestrian doorsets with resistance to fire and /or smoke control characteristics, this standard should only apply in conjunction with EN 16034.

Products covered by this European Standard are power operated hinged or manually operated internal pedestrian doorsets and screens with flush or panelled leaves, single or double leaf, which could be completed with:

— related building hardware;

— door closing devices;

— integral fanlights;

— adjacent parts that are contained within a single frame for inclusion in a single aperture.

NOTE 2 Manually operated doors with door closing devices are not considered to be power operated doors.

Products covered by this European Standard are not assessed for structural applications.

This European Standard does not apply to:

— industrial, commercial and garage doors and gates according to EN 13241;

— external pedestrian doorsets according to EN 14351-1;

— door leaves placed on the market as a single unit;

— door frames placed on the market as a single unit;

— power operated pedestrian doorsets, other than swing type, according to EN 16361.

Doorsets can be placed on the market with their component (leaf and frame) separate when each of these components are clearly identified.

This European Standard does not deal with any specific requirements on noise emitted from internal power operated hinged doorsets as their noise emission is not considered to be a relevant hazard.

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

EN 179, *Building hardware — Emergency exit devices operated by a lever handle or push pad, for use on escape routes — Requirements and test methods*

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 1026:2016, *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 on escape routes — Requirements and test methods*

EN 1154, *Building hardware — Controlled door closing devices — Requirements and test methods*

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

EN 1192, *Doors — Classification of strength requirements*

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

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

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

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

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

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

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

EN 12217:2015, *Doors — Operating forces — Requirements and classification*

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

EN 12365-1:2003, *Building hardware — Gasket and weatherstripping for doors, windows, shutters and curtain walling — Part 1: Performance requirements and classification*

EN 12365-2, *Building hardware — Gasket and weatherstripping for doors, windows, shutters and curtain walling — Part 2: Linear compression force test methods*

EN 12365-3, *Building hardware — Gasket and weatherstripping for doors, windows, shutters and curtain walling — Part 3: Deflection recovery test method*

EN 12365-4, *Building hardware — Gasket and weatherstripping for doors, windows, shutters and curtain walling — Part 4: Recovery after accelerated ageing test method*

EN 12400:2002, *Windows and pedestrian doors — Mechanical durability — Requirements and classification*

EN 12519:2018, *Windows and pedestrian doors — Terminology*

EN 12600:2002, *Glass in building — Pendulum test — Impact test method and classification for flat glass*

EN 13049:2003, *Windows — Soft and heavy body impact — Test method, safety requirements and classification*

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

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

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

EN 13141-2, *Ventilation for buildings — Performance testing of components/products for residential ventilation — Part 2: Exhaust and supply air terminal devices*

EN 13238, *Reaction to fire tests for building products — Conditioning procedures and general rules for selection of substrates*

EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*

EN 13637:2015, *Building hardware — Electrically controlled exit systems for use on escape routes — Requirements and test methods*

EN 14179-2, *Glass in building — Heat soaked thermally toughened soda lime 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*

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

EN 16005:2012, *Power operated pedestrian doorsets — Safety in use — Requirements and test methods*

EN 16034, *Pedestrian doorsets, industrial, commercial, garage doors and openable windows — Product standard, performance characteristics — Fire resisting and/or smoke control characteristics*

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

EN ISO 10077-1:2006, *Thermal performance of windows, doors and shutters — Calculation of thermal transmittance — Part 1: General (ISO 10077-1:2017)*

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

EN ISO 10140-1, *Acoustics — Laboratory measurement of sound insulation of building elements — Part 1: Application rules for specific products (ISO 10140-1)*

EN ISO 10140-2, *Acoustics — Laboratory measurement of sound insulation of building elements — Part 2: Measurement of airborne sound insulation (ISO 10140-2)*

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

3 Terms, definitions and symbols

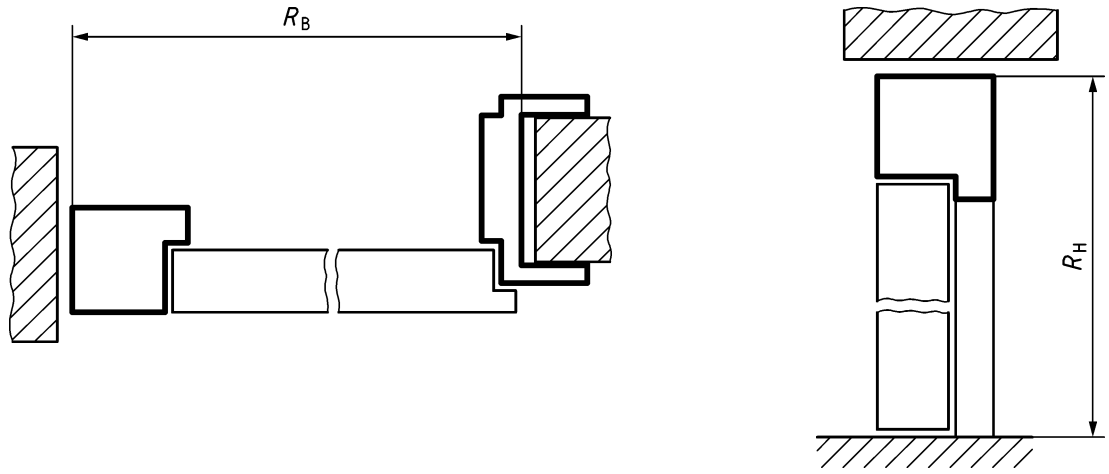
3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 14351-1, EN 16005, EN 16034 and EN 12519 and the following apply.

3.1.1
internal pedestrian doorset
construction product which is designed and used to close a permanent opening in internal separating elements and for which the main intended use is the access of pedestrians (e.g. entry doors into flats or into offices and fulfilling the provision above should be considered as an internal pedestrian doorset)

3.1.2
overall area
frame width x frame height

Note 1 to entry See Figure 2.



External width of frame "R_B" **External height of frame "R_H"**

Figure 2 — External width and height of frame

3.1.3
similar design
internal pedestrian doorset in which the replacement of components (e.g. glazing, building hardware, seals), and/or a change of material specification and/or dimensional change of profile section and/or methods and means of assembly does not change the classification and/or declared value of a performance characteristic

3.1.4
unframed glass doorset
doorset where the leaf (leaves) with/without adjacent part(s) is (are) made of glass (single or insulating glass unit)

3.1.5
adjacent part
additional lateral and/or above mounted elements, glazed or not, as parts of the complete doorset construction

3.1.6
glazed door with injury risk
doors on which the lower 1500mm is more than 30 % glass and of which at least one sheet of glass is greater than 0,2m²

3.1.7
closing face
face of a door leaf which is the first to move into the closed position

[SOURCE: EN 12519:2018, 3.8]

3.2 Symbols

For the purposes of this document, the following symbol applies.

U_D is the thermal transmittance for (internal pedestrian) doorsets

4 Product characteristics

4.1 General

For each characteristic this standard identifies the means of their determination and the ways to express the results.

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

If the performance of the product differs between the exposures of the two faces, either both classifications shall be given separately and identified or at least the face exposed to the test shall be given.

If relevant, for double leaf doorset, the characteristics shall be expressed with 2 values, the first one for the primary leaf and the second one for the secondary leaf.

4.2 Release of dangerous substances (only for emissions into indoor air impact) (for intended use a, b and c)

National regulations on dangerous substances may require verification and declaration on release and sometimes content when construction products covered by this standard are placed on those market. In the absence of European harmonised test methods, verification and declaration on release/content should be done taking into account national provisions in the place of use.

NOTE An informative database of European and national provisions on dangerous substances is available at the Construction web site on EUROPA accessed through: http://ec.europa.eu/growth/tools-databases/cp-ds_en.

4.3 Impact resistance (where relevant, only for glazed doors with injury risks) (for intended use a, b and c)

4.3.1 Glazed doors

Impact resistance of glazed doors with injury risk is the ability of a doorset to keep in place glazed parts.

Where safety glass is included, the following standards apply according to the type of glass: EN 14449, or EN 12150-2 or EN 14179-2. The safe breaking performance (fracture behaviour) is covered by EN 12600. When tested in accordance to 5.3, the results are expressed according to EN 13049:2003, Clause 8.

4.3.2 Unframed glass doorsets

Glass used for unframed glass internal pedestrian doorsets shall either not break or break as defined in EN 12600:2002, Clause 4.

4.4 Height (for intended use a, b and c)

The height is the clear opening height of internal pedestrian doorsets. When measured according to 5.4, it shall be expressed in mm including the tolerance.

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

4.5 Reaction to fire

4.5.1 Reaction to fire of components (for intended use a, b and c)

Reaction to fire is the response of components of doorset in contributing by their own decomposition to a fire to which they are exposed, under specified conditions.

The reaction to fire of components shall be tested according to 5.5 and classified in accordance with EN 13501-1. Only test methods relevant for the class the manufacturer wants to prove for his product are relevant. Components made of Iron, steel, stainless steel, aluminium and aluminium alloys not in finely divided form and not containing more than 1,0 % by weight or volume of homogeneously distributed organic material, are considered as belonging to class A1 without the need of being tested.

The relevant components that can be subject for test are:

— profile (frame, stiles and rails);

— infill (e.g. glazing, panels) or door leaf-board ;

— sealant and gasket between infill and profile;

— organic coating/top layers (if relevant and not part of the profile or infill).

NOTE Hardware components and gasket between frame and door leaf are not a relevant component due to negligible influence for reaction to fire performance (compression of the seal and overlapping of the rebate).

Individual components covered by their own product standard (e.g. glass or wood) do not need to be re-tested. The classification derived for the individual components can be used as the classification for that product.

4.5.2 Reaction to fire of the doorset

The reaction to fire of a doorset shall be tested according to 5.5 and classified in accordance with EN 13501-1. Only test methods applicable for the class the manufacturer wants to prove for his product are relevant.

For the classification:

a) for class E of doorsets the relevant components (as specified in 4.5.1) shall be tested. The overall result for the product resulting from the single flame source test is determined by the component with the least favourable performance.

b) for classes D to A2 of doorsets the relevant components (as specified in 4.5.1) shall be tested. Therafter two alternative routes are possible:

   1) Either the classification shall be based on the testing of the whole product including single flame source test of the individual components as specified in 4.5.1; or

   2) The classification shall be based on the test results of the individual components. In this case the classification report for any range of doorsets based on this approach shall be written by a notified test laboratory. The worst classification of the profile, or coating on the relevant substrate or infill/door leaf will determine the classification of the whole product.

4.6 Direct airborne sound insulation index (only for uses where acoustic performance is required) (for intended use b)

Direct airborne sound insulation for internal pedestrian doorsets is the ability of internal pedestrian doorsets to insulate against direct airborne noise. The acoustic performance of the doorset, shall be determined according to either the provisions in 5.6.1 (reference method) or, as an alternative determine the sound insulation of operable internal pedestrian doorsets according to 5.6.2.