BS EN 16361:2013

BSI Standards Publication

Power operated pedestrian doors — Product standard, performance characteristics — Pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics

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National foreword

This British Standard is the UK implementation of EN 16361:2013.

When reference to this Standard has been published in the Official Journal of the European Union (OJEU), compliance with it will confer a presumption of compliance with the Construction Products Regulation.

The UK participation in its preparation was entrusted to Technical Committee B/538, Doors, windows, shutters, hardware and curtain walling.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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EUROPEAN STANDARD

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English Version

Power operated pedestrian doors - Product standard, performance characteristics - Pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics

Portes motorisées pour piétons - Norme de produit, caractéristiques de performance - Blocs-portes pour piétons, autres que de type battant, initialement conçus pour une installation avec un système de motorisation sans caractéristiques résistance au feu ni pare-fumée

Kraftbetätigte Türen - Produktnorm, Leistungseigenschaften - Türsysteme, mit Ausnahme von Drehflügeltüren, ohne Eigenschaften bezüglich Feuerschutz und Rauchdichtheit

This European Standard was approved by CEN on 26 July 2013.

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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 16361:2013) 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 April 2014, and conflicting national standards shall be withdrawn at the latest by July 2015.

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 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA and ZB, which are an integral part of this document.

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

1 Scope

This European Standard specifies requirements and test/assessment/calculation methods for external and internal power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics.

Such doorset constructions may be operated electro-mechanically, electro-hydraulically or pneumatically.

These doorsets include power operated pedestrian sliding doorsets, revolving doorsets, balanced (sliding/swing) doorsets and folding doorsets with one or more horizontally moving leaves.

This European Standard applies to power operated pedestrian doorsets with flush or panelled leaves, complete with:

— integral fanlights, if any;

NOTE 1 A fanlight is a panel over a door which is part of the doorset.

— side panels that are contained within a single frame for inclusion in a single aperture, if any.

The intended uses of the products covered by this European Standard are:

— doorsets for external use in escape routes and other declared specific uses and/or uses subject to other specific requirements, in particular noise, energy, tightness and safety-in-use in construction works;

— doorsets for internal use in escape routes, communication and other declared specific uses and/or uses subject to other specific requirements, in particular noise and safety-in-use in construction works;

— doorsets for internal use in escape routes, communication and other declared specific uses and/or uses subject to other specific requirements, in particular noise, energy and safety-in-use in construction works.

The products covered by this European Standard are not assessed for structural applications of the building.

This European Standard does not cover operation in environments where the electromagnetic disturbances are outside the range of those specified in EN 61000-6-2.

This European Standard does not apply to:

— external pedestrian doorsets according to EN 14351-1;

— internal pedestrian doorsets according to prEN 14351-2;

— fire resistant and/or smoke control doorsets according to prEN 16034;

— industrial, commercial and garage doors and gates according to EN 13241-1;

— lifts doorsets;

— vehicles doorsets;

— doorsets used in industrial processes;

— doorsets in partition walls;

— doorsets outside the reach of people (such as crane gantry fences);

— turnstiles;

— platform doorsets.

This European Standard does not cover special functions of doorsets (e.g. security, fire aspects in banks, airports, etc.).

This European Standard does not deal with any specific requirements on noise emitted from power operated doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics as their noise emission is not considered to be a relevant hazard.

NOTE 2 Noise emission of power operated doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics is not a significant hazard for the users of these products. It is a comfort aspect.

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 1026:2000, *Windows and doors — Air permeability — Test method*

EN 1027:2000, *Windows and doors — Watertightness — Test method*

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

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

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

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

EN 12208:1999, *Windows and doors — Watertightness — Classification*

EN 12210:1999, *Windows and doors — Resistance to wind load — Classification*

EN 12211:2000, *Windows and doors — Resistance to wind load — Test method*

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

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

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 14351-1:2006+A1:2010, *Windows and doors — Product standard, performance characteristics — Part 1: Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics*

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

EN 61000-6-2, *Electromagnetic compatibility (EMC) — Part 6-2: Generic standards — Immunity for industrial environments (IEC 61000-6-2)*

EN 61000-6-3, *Electromagnetic compatibility (EMC) — Part 6-3: Generic standards — Emission standard for residential, commercial and light-industrial environments (IEC 61000-6-3)*

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 10077-1:2006)*

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

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

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 and definitions

For the purposes of this document, the terms and definitions given in EN 16005:2012, EN 12519:2004, EN 14351-1:2006+A1:2010 and the following apply.

3.1
night shield
additional element to close the entrance of a revolving doorset

4 Requirements

4.1 General

The performance characteristics for power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics shall be determined and expressed in accordance with 4.2 to 4.11.

NOTE 1 The order in which the performance characteristics are identified does not imply an order of priority or a test sequence.

The performance characteristics of 4.2, 4.3, 4.5, 4.7 to 4.10 and the burglar resistance of 4.13.4 shall be determined with closed and locked doorsets for revolving doorsets with closed night shield or in the night position.

NOTE 2 Without night shield most of the following requirements are not applicable to revolving doors due to requirements of safety in use (e.g. safety distances).

For revolving doorsets the external side is the part of the doorset which is exposed to the weather.

4.2 Rate of release of dangerous substances (only for indoor impact)

This test is applicable to all the intended uses of the products covered by this European Standard.

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 markets.

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 covering European and national provisions on dangerous substances is available at the Construction web site on EUROPA accessed through: *http://ec.europa.eu/enterprise/construction/cpd-ds/*.

4.3 Impact resistance (only for glazed doors with injury risks)

Impact resistance is the ability of a doorset to keep in place a glazed insert without creating hazards in case of impact with a body.

This test is applicable to all the intended uses of the products covered by this European Standard.

Doorsets fitted with glass or other fragmental material and doorsets with unframed glass leaves 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.

4.4 Height

Height is the clear opening of a doorset a pedestrian can use to pass through it.

This test is applicable to all the intended uses of the products covered by this European Standard.

The clear opening height (see EN 12519:2004, 3.1) shall be expressed in millimetres.

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

NOTE The height can be diminished due to projecting hardware and angle of opening.

4.5 Direct airborne sound insulation index (only for uses where acoustic performance is declared)

The direct airborne sound insulation index is the ability of a doorset to protect an ambient from the noise coming from another one.

This test is applicable to all the intended uses of the products covered by this European Standard when the acoustic performance is declared.

The direct airborne sound insulation index, when declared, shall be determined in accordance with EN ISO 10140-2 (reference method).

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

4.6 Impact forces (safety in use)

Impact forces are the forces a user could be subject to when getting in contact with a moving door leaf.

This test is applicable to all the intended uses of the products covered by this European Standard.

Impact forces exerted by the door leaf of power operated doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics, where crushing or impact hazards are safeguarded by limitation of forces, shall be in accordance with EN 16005:2012, 4.6.7.

4.7 Water tightness (only for external doors)

Water tightness is the ability of a closed doorset to reduce penetration of water in the environment where the doorset is installed.

This test is only applicable to doorsets for external use.

The test shall be carried out in accordance with EN 1027:2000 with the following additions and modifications:

— Clause 1: Addition: revolving doorsets need not be fully assembled but shall include the relevant parts of the doorset for the test, e.g. night shield;

— Subclause 6.1: Addition: the test sample need not be fully functional but shall include the relevant parts of the doorset for the test, e.g. night shield for revolving doorset;

— Subclause 7.1: Modification: the minimum test pressure of 500 Pa is not required.

The results shall be expressed in accordance with EN 12208:1999 with the following additions and modifications:

— Clause 4: Addition: water penetration through the gap between floor level and the door leaf shall not be considered for classification of the doorset;

— Clause 4, Table 1: Modification: classes are limited to 0 to 5A, 0 to 5B and Exxx for $P_{max} > 200$ Pa.

The test for water tightness of side panels shall be carried out on the side panel or on its individual parts. In the latter case, the designation of the side panel shall be determined by the part(s) with the most unfavourable performance.

NOTE Installation of a weather shield or similar can reduce the need for water tightness of the doorset.

4.8 Resistance to wind load (only for external doors)

Resistance to wind load is the ability of a closed doorset to withstand the load of the wind in the environment where the doorset is installed.

This test is only applicable to doorsets for external use.

Tests shall be carried out in accordance with EN 12211:2000 with the following modifications:

— Subclause 6.1: the test sample need not be fully functional but shall include the relevant parts of the doorset for the test, e.g. night shield for revolving doorset;

— Subclause 7.1: the air permeability test according to EN 1026 (P1 and P2) shall not be performed;

— Subclause 7.3: the number of cycles shall be 20 and the air permeability test according to EN 1026 shall not be repeated.

The deflection of frame elements (e.g. transoms and mullions) shall be determined by calculation or by test (reference method).

The results shall be expressed in accordance with EN 12210:1999 with the following modifications:

— Clause 4: Table 1 is modified as follows:

Table 1 — Classification of wind load for external doorsets (EN 12210:1999, Table 1)

Class	P1 (Pa)	P2 [a] (Pa)	P3 (Pa)
PPD0	< 200	< 100	< 300
PPD1	200	100	300
PPD2	300	150	450
PPD(test pressure)	xxxx [b]		

[a] This pressure is repeated 20 times.

[b] xxxx is the actual test pressure P1 (e.g. 350, etc.).

— Subclause 6.1: the air permeability requirement (after the P1 and P2 tests) is not applicable.

When appropriate European Standards are in place, the determination of the load-bearing capacity should be carried out as prescribed in those European Standards.

4.9 Thermal transmittance (only for external doors and for internal doors where the thermal insulation is declared)

Thermal transmittance is the ability of a doorset to avoid the temperature of an ambient is influenced by the temperature of another ambient next to it.

The test is only applicable to doorsets for external use and to doorsets for internal use where thermal insulation is declared and shall be determined:

a) by calculation using:

   1) EN ISO 10077-1; or

   2) EN ISO 10077-1 and EN ISO 10077-2.

   Calculation previously performed in accordance with EN ISO 10077-1 and tabulated values in accordance with EN ISO 10077-1:2006, Table F.1, may be taken into account with an addition of 0,1 W/m^2K.

or

b) by hot box method using EN ISO 12567-1.

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

4.10 Air permeability (only for external doors and for internal doors where thermal insulation is declared)

Air permeability is the ability of a doorset to reduce unwanted air exchange between two ambients at different temperature.

The test is only applicable to doorsets for external use and to doorsets for internal use where thermal insulation is declared.

This test shall only be performed when thermal performance of the doorset is declared. Two air permeability tests shall be carried out in accordance with EN 1026 (reference method), one with positive test pressures and one with negative test pressures.

EN 1026:2000 is applicable with the following modification:

— Subclause 7.3.1: the minimum test pressure of 500 Pa is not required.

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

The test result, defined as the numerical average of the two air permeability values (m^3/h) at each pressure step shall be expressed in accordance with EN 12207:1999, 4.4 and 4.5 which are applicable with the following modifications:

Table 2 — Reference air permeabilities at 100 Pa and maximum test pressures, related to overall area, for classes 1 to 4 (EN 12207:1999, Table 1)

Class	**Reference air permeability** 100 Pa $\frac{m^3}{h \times m^2}$	**Maximum test pressure** (Pa)
PPD0	> 50	< 150
PPD1	50	150
PPD2	27	300
PPD(test pressure and measured air permeability)	xxx	

Table 3 — Reference air permeabilities at 100 Pa and maximum test pressures, related to joints length, for classes 1 to 4 (EN 12207:1999, Table 2)

Class	**Reference air permeability** 100 Pa $\frac{m^3}{h \times m}$	**Maximum test pressure** (Pa)
PPD0	> 12,5	< 150
PPD 1	12,5	150
PPD 2	6,75	300
PPD(test pressure and measured air permeability)	xxx	

4.11 Durability

4.11.1 General

The manufacturer shall provide information about maintenance and the replaceable parts.

By means of adequate choice of materials (including coatings, preservations, composition and thickness), 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 power operated doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics 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 components can be found in their respective material and component standards.

4.11.2 Durability

The durability of certain characteristics shall be ensured as follows:

— impact forces (safety in use):	The durability against aging/degradation of this characteristic shall be tested according to EN 16005:2012, 5.8. The results shall be expressed according to the following classes: — Class PPD1: 200 000 cycles — Class PPD2: 500 000 cycles — Class PPD3: 1 000 000 cycles — Class PPD(number of cycles performed): > 1 000 000 cycles After the durability test the impact forces test is repeated and the result shall be in accordance with 4.6.

4.12 Electromagnetic compatibility (EMC)

Power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics in accordance with this standard shall be designed so that they do not emit any harmful electromagnetic emissions when installed and are not adversely affected by electromagnetic emissions. Power operated doorsets shall satisfy the requirements of EN 61000-6-2 (for immunity to disturbances) and EN 61000-6-3 (for electromagnetic emissions).

Measured values of the electromagnetic emission shall be within the limits specified in EN 61000-6-3.

Compliance criteria of the immunity to disturbances shall be as specified in EN 61000-6-2 and, in addition, the following assessment criteria apply:

Criterion A: The tests for electromagnetic compatibility do not affect any of the doorset functions;

Criterion B: The tests for electromagnetic compatibility does not result in:

- speed in excess of 20 % of the specified performance;
- unexpected start of the movement;
- inhibition of operation of safety/interlocking devices;
- reduction in fault detection capability.

Criterion B is the minimum requirement for the immunity to disturbances of power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics in accordance with this European Standard.

4.13 Other requirements

4.13.1 Glazing

Glass meeting the requirements of the standards identified in Annex A shall be deemed to meet the long-term performance of the glazing (especially the Insulated Glass Units (IGU)).

4.13.2 Unframed glass doorsets

Glass in unframed glass doorsets shall comply, as applicable, with EN 1863-2, EN 12150-2, EN ISO 12543-2, EN 14179-2 or EN 14321-2.

4.13.3 Doorsets in escape routes and emergency exits

Doorsets in escape routes and emergency exits shall fulfil the requirements of EN 16005:2012, 4.7.2.

NOTE Additional National requirements might apply to doorsets in emergency and escape routes.

For doorsets with a break out function in escape routes and emergency exits, the required force to operate the break out function shall not exceed the values required in EN 16005:2012, 4.7.2.2.

4.13.4 Burglar resistance

Burglar resistance is voluntary and not part of the labelling according to this European Standard.

If burglar resistance is required it should be tested in accordance with EN 1628, EN 1629 and EN 1630. The results shall be expressed in accordance with EN 1627.

5 Testing, assessment and sampling methods

5.1 General

The performance characteristics for power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics required in Clause 4 are subject to testing and/or assessment as detailed in 5.2 to 5.11.

5.2 Rate of release of dangerous substances (only for indoor impact)

Rate of release/content of dangerous substances of 4.2, in the absence of European harmonised test methods, should be verified taking into account national provisions in the place of use.

5.3 Impact resistance (only for glazed doors with injury risks)

Impact resistance of 4.3 shall be tested according to EN 13049.

5.4 Height

Height of 4.4 shall be tested measuring with a rule, or other suitable apparatus, the clear opening of the doorset.

5.5 Direct airborne sound insulation index (only for uses where acoustic performance is declared)

Direct airborne sound insulation index of 4.5 shall be determined in accordance with EN ISO 10140-2.

5.6 Impact forces (safety in use)

Impact forces of 4.6 shall be measured according to EN 16005:2012, 4.6.7.

5.7 Water tightness (only for external doors)

Water tightness of 4.7 shall be tested according to EN 1027 as modified in 4.7.

5.8 Resistance to wind load (only for external doors)

Resistance to wind load of 4.8 shall be tested according to EN 12211 as modified in 4.8.

5.9 Thermal transmittance (only for external doors and for internal doors where thermal insulation is declared)

Thermal transmittance of 4.9 shall be determined:

a) by calculation using:

   1) EN ISO 10077-1; or

   2) EN ISO 10077-1 and EN ISO 10077-2.

   Calculation previously performed in accordance with EN ISO 10077-1 and tabulated values in accordance with EN ISO 10077-1:2006, Table F.1, may be taken into account with an addition of 0,1 W/m^2K.

or

b) by hot box method using EN ISO 12567-1.

5.10 Air permeability (only for external doors and for internal doors where thermal insulation is declared)

The air permeability of 4.10 shall be tested according to EN 1026 as modified in 4.10.

5.11 Durability

The durability against ageing/degradation of impact forces (safety in use) shall be tested according to EN 16005:2012, 5.8.

The impact forces shall be tested after the durability test in accordance with 5.6

5.12 Electromagnetic compatibility (EMC)

5.12.1 Verification

Compliance with the requirements for electromagnetic compatibility specified in 4.12 shall be tested in accordance with the standards referred to in that subclause. The tests shall be performed on a test specimen incorporating all the relevant components. The test can be performed on a doorset model if, due to the size of the doorset assembly, testing of the complete doorset assembly is not practicable. The doorset model shall incorporate the relevant operating components (sub-assemblies) in accordance with the manufacturer's specifications.

5.12.2 Test for electromagnetic emissions

The doorset shall be actuated cyclically during the tests for electromagnetic emissions. The number and length of stationary phases shall be minimised. It shall be checked whether the requirements stated in 4.12 have been satisfied.

5.12.3 Tests for immunity to disturbances

The test for immunity to disturbances shall be performed with the doorset being operated cyclically. It shall be checked whether the requirements stated in 4.12 have been satisfied.

6 Evaluation of conformity

6.1 General

The compliance of power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics with the requirements of this standard and with the declared values (including classes) shall be demonstrated by:

— Initial Type Testing;

— Factory Production Control by the manufacturer, including product assessment.

The manufacturer shall always retain the overall control and shall have the necessary means to take responsibility for the product.

6.2 Initial Type Testing – Type Testing

6.2.1 General

Initial Type Testing and Type Testing shall be performed to demonstrate compliance with this European Standard.

All essential characteristics for which the manufacturer declares performances, are subject to Initial Type Testing. In addition, the need to perform Type Tests applies to all other characteristics included in a standard when the manufacturer claims compliance, unless the standard gives provisions (e.g. use of previously existing data, CWFT and conventionally accepted performance) for declaring performances without performing tests.

Tests previously performed in accordance with the provisions of this European Standard, may be taken into account provided that they were made to the same or a more rigorous test method, under the same system of attestation of conformity on the same product or products of similar design, construction and functionality, such that the results are applicable to the product in question.

NOTE 1 "Same system of attestation of conformity" means testing by an independent third party and, only for products covered by attestation of conformity system 1, under the responsibility of a product certification body.

For the purposes of testing, the manufacturer's products may be grouped into families, where it is considered that the results for one or more characteristics from any one product within the family are representative for that same characteristics for all products within that same family (a product may be in different families for different characteristics).

NOTE 2 Products can be in different families for different characteristics.

Reference to the test method standards should be made to allow the selection of a suitable representative sample.

In addition, Type Tests or Initial Type Testing shall be performed for all characteristics included in the standard for which the manufacturer declares performances:

— at the beginning of the production of a new or modified power operated pedestrian doorset, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics (unless a member of the same family); or

— at the beginning of a new or modified method of production (where this may affect the stated properties); or

they shall be repeated for the appropriate characteristic(s), whenever a change occurs in the power operated pedestrian doorset, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics design, in the raw material or in the supplier of the components, or in the production process (subject to the definition of a family), which would affect significantly one or more of the characteristics.

Where components are used whose characteristics have already been determined, by the component manufacturer, on the basis of compliance with other product standards, these characteristics need not be re-assessed. The specifications of these components shall be documented, as shall be included in the inspection scheme for ensuring their compliance.

Products marked in accordance with appropriate harmonised European specifications may be presumed to have the performances stated with that marking, although this does not replace the responsibility on the power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics designer to ensure that the power operated pedestrian doorset, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics as a whole is correctly designed and its component products have the necessary performance values to meet the design.

6.2.2 Test samples, testing and compliance criteria

The number of samples of power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics to be tested/assessed shall be in accordance with Table 4.

Table 4 — Number of samples to be tested and compliance criteria

Characteristic	Requirement	Assessment method	No. of samples	Compliance criteria
Rate of release of dangerous substances (only for indoor impact)	4.2	As required by regulations		
Impact resistance (only for glazed doors with injury risks)	4.3	5.3	1 or 2	4.3
Height	4.4	5.4	1	4.4
Direct airborne sound insulation index (only for uses where acoustic performance is declared)	4.5	5.5	1	4.5
Impact forces (safety in use)	4.6	5.6	1	4.6
Water tightness (only for external doors)	4.7	5.7	1	4.7
Resistance to wind load (only for external doors)	4.8	5.8	1	4.8

Table 4 *(continued)*

Thermal transmittance (only for external doors and for internal doors where the thermal insulation is declared)	4.9	5.9	1	4.9
Air permeability (only for external doors and for internal doors where thermal insulation is declared)	4.10	5.10	1	4.10
Durability of impact forces (safety in use) against: - Ageing/degradation	4.11	5.11	1	4.11

6.2.3 Test reports

All Type Tests, and/or Initial Type Tests and their results shall be documented in test reports. All test reports shall be retained by the manufacturer for at least 10 years after the last date of production of the power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics to which they relate.

6.3 Factory production control (FPC)

6.3.1 General

The manufacturer shall establish, document and maintain a FPC system to ensure that the products placed on the market comply with the declared performance of the characteristics.

The FPC system shall consist of written procedures, regular inspections and tests and/or assessments and the use of the results to control raw and other incoming materials or components, equipment, the production process and the product. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures.

This production control system documentation shall ensure a common understanding of conformity evaluation and enable the achievement of the required product characteristics and the effective operation of the production control system to be checked. Factory production control therefore brings together operational techniques and all measures allowing maintenance and control of the compliance of the product with this European standard.

6.3.2 Requirements

6.3.2.1 General

The manufacturer is responsible for organising the effective implementation of the FPC system. Tasks and responsibilities in the production control organisation shall be documented and this documentation shall be kept up-to-date.

The responsibility, authority and the relationship between personnel that manages, performs or verifies work affecting product conformity, shall be defined. This applies in particular to personnel that needs to initiate actions preventing product non-conformities from occurring, actions in case of non-conformities and to identify and register product conformity problems. Personnel performing work affecting product conformity shall be competent on the basis of appropriate education, training, skills and experience for which records shall be maintained.

In each factory the manufacturer may delegate the action to a person having the necessary authority to:

— identify procedures to demonstrate conformity of the product at appropriate stages;

— identify and record any instance of non-conformity;

— identify procedures to correct instances of non-conformity.

The manufacturer shall draw up and keep up-to-date documents defining the factory production control. The manufacturer's documentation and procedures should be appropriate to the product and manufacturing process. The FPC system should achieve an appropriate level of confidence in the conformity of the product. This involves:

a) the preparation of documented procedures and instructions relating to factory production control operations, in accordance with the requirements of the Technical Specification to which reference is made;

b) the effective implementation of these procedures and instructions;

c) the recording of these operations and their results;

d) the use of these results to correct any deviations, repair the effects of such deviations, treat any resulting instances of non-conformity and, if necessary, revise the FPC to rectify the cause of non-conformity.

Where subcontracting takes place, the manufacturer shall retain the overall control of the product and ensure that he receives all the information that is necessary to fulfil his responsibilities according to this European Standard.

If the manufacturer has part of the product designed, manufactured, assembled, packed, processed and/or labelled by subcontracting, the FPC of the subcontractor may be taken into account, where appropriate for the product in question.

The manufacturer who subcontracts all of his activities may in no circumstances pass these responsibilities on to a subcontractor.

NOTE Manufacturers having an FPC system, which complies with EN ISO 9000 and which addresses the requirements of this European Standard are recognised as satisfying the FPC requirements of the Council Directive 89/106/EEC.

6.3.2.2 Equipment

6.3.2.2.1 Testing

All weighing, measuring and testing equipment shall be calibrated and regularly inspected according to documented procedures, frequencies and criteria.

6.3.2.2.2 Manufacturing

All equipment used in the manufacturing process shall be regularly inspected and maintained to ensure use, wear or failure does not cause inconsistency in the manufacturing process. Inspections and maintenance shall be carried out and recorded in accordance with the manufacturer’s written procedures and the records retained for the period defined in the manufacturer's FPC procedures.

6.3.2.3 Raw materials and components

The specifications of all incoming raw materials and components shall be documented, as shall the inspection scheme for ensuring their compliance. In case supplied kit components are used, the attestation of conformity level of the component shall be that given in the appropriate harmonised technical specification for that component.

6.3.2.4 Design process

The factory production control system shall document the various stages in the design of products, identify the checking procedure and those individuals responsible for all stages of design. During the design process itself, a record shall be kept of all checks, their results, and any corrective actions taken.

This record shall be sufficiently detailed and accurate to demonstrate that all stages of the design phase, and all checks, have been carried out satisfactorily.

6.3.2.5 Traceability and marking

Individual products or product batches shall be identifiable and traceable with regard to their production origin. The manufacturer shall have written procedures ensuring that processes related to affixing traceability codes and/or markings are inspected regularly.

6.3.2.6 Controls during manufacturing process

The manufacturer shall plan and carry out production under controlled conditions.

6.3.2.7 Product testing and evaluation

The manufacturer shall establish procedures to ensure that the stated values of the characteristics he declares, are maintained. The characteristics, and the means of control, are:

— *Rate of release of dangerous substances*: shall be subject to the tests indicated in 5.2 at least every time materials used for production of the power operated pedestrian doorset, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics are changed or new materials introduced;

— *Impact resistance*: shall be subject to the tests indicated in 5.3 at least every time the way of incorporating the glazing in the door leaf is modified;

— *Height*: shall be subject to the tests indicated in 5.4 at least every time the dimensions of the power operated pedestrian doorset, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics are changed;

— *Direct airborne sound insulation index*: shall be subject to the tests indicated in 5.5 at least every time materials and/or design of the power operated pedestrian doorset, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics are modified;

— *Impact forces*: shall be subject to the tests indicated in 5.6 at least every time materials and/or production line and/or design of the power operated pedestrian doorset, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics are modified;

— *Water tightness:* shall be subject to the tests indicated in 5.7 at least every time materials and/or production line and/or design of the power operated pedestrian doorset, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics and/or weather stripping are modified;

— *Resistance to wind load*: shall be subject to the tests indicated in 5.8 at least every time materials and/or production line and/or design of the power operated pedestrian doorset, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics are modified;

— *Thermal transmittance*: shall be subject to the tests indicated in 5.9 at least every time materials used for production of the power operated pedestrian doorset, other than swing type, initially designed for

installation with power operation without resistance to fire and smoke leakage characteristics are changed or new materials introduced;

— *Air permeability*: shall be subject to the tests indicated in 5.10 at least every time materials and/or production line and/or design of the power operated pedestrian doorset, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics are modified;

— *Durability of impact forces against ageing/degradation*: shall be subject to the tests indicated in 5.11 at least every time impact forces are re-tested.

6.3.2.8 Non-complying products

The manufacturer shall have written procedures which specify how non-complying products shall be dealt with. Any such events shall be recorded as they occur and these records shall be kept for the period defined in the manufacturer's written procedures.

6.3.2.9 Corrective action

The manufacturer shall have documented procedures that instigate action to eliminate the cause of non-conformities in order to prevent recurrence.

6.3.2.10 Handling, storage, packaging

The manufacturer shall have procedures providing methods of product handling and shall provide suitable storage areas preventing damage or deterioration.

6.3.3 Product specific requirements

The FPC system shall:

— address this European Standard;

and

— ensure that the products placed on the market comply with the declared performance characteristics.

The FPC system shall include a product specific FPC, which identifies procedures to demonstrate compliance of the product at appropriate stages, i.e.:

a) the controls and tests to be carried out prior to and/or during manufacture according to a frequency laid down in the FPC test plan;

and/or

b) the verifications and tests to be carried out on finished products according to a frequency laid down in the FPC test plan.

If the manufacturer uses only finished products, the operations under b) shall lead to an equivalent level of compliance of the product as if FPC had been carried out during the production.

If the manufacturer carries out parts of the production himself, the operations under b) may be reduced and partly replaced by operations under a). Generally, the more parts of the production that are carried out by the manufacturer, the more operations under b) may be replaced by operations under a).

In any case the operation shall lead to an equivalent level of compliance of the product as if FPC had been carried out during the production.

NOTE Depending on the specific case, it can be necessary to carry out the operations referred to under a) and b), only the operations under a) or only those under b).

The operations under a) refer to the intermediate states of the product as on manufacturing machines and their adjustment, and measuring equipment, etc. These controls and tests and their frequency shall be chosen based on product type and composition, the manufacturing process and its complexity, the sensitivity of product features to variations in manufacturing parameters, etc.

The manufacturer shall establish and maintain records that provide evidence that the production has been sampled and tested. These records shall show clearly whether the production has satisfied the defined acceptance criteria and shall be available for at least three years.

For products covered by attestation of conformity 1, these records shall be available for inspection.

Where the product fails to satisfy the acceptance measures, the provisions for non-complying products shall apply, the necessary corrective action shall immediately be taken and the products or batches not complying shall be isolated and properly identified.

Once the fault has been corrected, the test or verification in question shall be repeated.

The results of controls and tests shall be properly recorded. The product description, date of manufacture, test method adopted, test results and acceptance criteria shall be entered in the records under the signature of the person responsible for the control/test.

With regard to any control result not meeting the requirements of this European Standard, the corrective measures taken to rectify the situation (e.g. a further test carried out, modification of manufacturing process, throwing away or putting right of product) shall be indicated in the records.

Individual products or batches of products and the related manufacturing documentation shall be completely identifiable and retraceable.

6.3.4 Initial inspection of factory and of FPC

For products covered by attestation of conformity system 1, initial inspection of factory and of FPC shall be carried out when the production process has been finalised and in operation. The factory and FPC documentation shall be assessed to verify that the requirements of 6.3.2 and 6.3.3 are fulfilled.

During the inspection it shall be verified:

a) that all resources necessary for the achievement of the product characteristics required by this European Standard are in place and correctly implemented; and

b) that the FPC-procedures in accordance with the FPC documentation are followed in practice;

and

c) that the product complies with the Initial Type Testing/Type Testing samples, for which compliance with this European Standard has been verified.

All locations where final assembly or at least final testing of the relevant product is performed, shall be assessed to verify that the above conditions a) to c) are in place and implemented. If the FPC system covers more than one product, production line or production process, and it is verified that the general requirements are fulfilled when assessing one product, production line or production process, then the assessment of the general requirements does not need to be repeated when assessing the FPC for another product, production line or production process.

All assessments and their results shall be documented in the initial inspection report.

6.3.5 Continuous surveillance of FPC for products covered by attestation of conformity system 1

Surveillance of the FPC shall be undertaken once per year. The surveillance of the FPC shall include a review of the FPC test plan(s) and production processes(s) for each product to determine if any changes have been made since the last assessment or surveillance. The significance of any changes shall be assessed.

Checks shall be made to ensure that the test plans are still correctly implemented and that the production equipment is still correctly maintained and calibrated.

The records of tests and measurement made during the production process and to finished products shall be reviewed to ensure that the values obtained still correspond with those values for the samples submitted to Initial Type Testing/Type Testing and that the correct actions have been taken for non-compliant devices.

6.3.6 Procedure for modifications

If modifications are made to the product, production process or FPC system that could affect any of the product characteristics required by this standard, then all the characteristics for which the manufacturer declares performance, which may be affected by the modification, shall be subject to Initial Type Testing/Type Testing, except as described in 6.2.1 and 6.3.7.

Where relevant, a re-assessment of the factory and of the FPC system shall be performed for those aspects, which may be affected by the modification.

All assessments and their results shall be documented in a report.

6.3.7 One-off products, pre-production products (e.g. prototypes) and products produced in very low quantity

The power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics produced as a one-off, prototypes assessed before full production is established, and products produced in very low quantities, i.e. not more than five per year, shall be assessed as follows.

For type assessment, the provisions of 6.2.1, 3rd paragraph apply, together with the following additional provisions:

— in case of prototypes, the test samples shall be representative of the intended future production and shall be selected by the manufacturer;

— on request of the manufacturer, the results of the type assessment of prototype samples may be included in a certificate or in test reports issued by the involved third party.

The FPC system of one-off products and products produced in very low quantities shall ensure that raw materials and/or components are sufficient for production of the product. The provisions on raw materials and/or components shall apply only where appropriate. The manufacturer shall maintain records allowing traceability of the product.

For prototypes, where the intention is to move to series production, the initial inspection of the factory and FPC shall be carried out before the production is already running and/or before the FPC is already in practice. The following shall be assessed:

— the FPC-documentation; and

— the factory.

In the initial assessment of the factory and FPC it shall be verified:

a) that all resources necessary for the achievement of the product characteristics required by this European Standard will be available; and

b) that the FPC-procedures in accordance with the FPC-documentation will be implemented and followed in practice; and

c) that procedures are in place to demonstrate that the factory production processes can produce a product complying with the requirements of this European Standard and that the product will be the same as the initial type testing/type testing samples, for which compliance with this European Standard has been verified.

Once series production is fully established, the provisions of 6.3 shall apply.

Annex A
(normative)

Standards and draft standards on glass

EN 572-9, *Glass in building — Basic soda lime silicate glass products — Part 9: Evaluation of conformity/Product standard*

EN 1096-4, *Glass in building — Coated glass — Part 4: Evaluation of conformity/Product standard*

EN 1279-5, *Glass in building — Insulating glass units — Part 5: Evaluation of conformity*

EN 1748-1-2, *Glass in building — Special basic products — Borosilicate glasses — Part 1-2: Evaluation of conformity/Product standard*

EN 1748-2-2, *Glass in building — Special basic products — Glass ceramics — Part 2-2: Evaluation of conformity/Product standard*

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

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

EN 12337-2, *Glass in building — Chemically strengthened soda lime silicate glass — Part 2: Evaluation of conformity/Product standard*

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

EN 13024-2, *Glass in building — Thermally toughened borosilicate safety glass — Part 2: Evaluation of conformity/Product standard*

EN 14178-2, *Glass in building — Basic alkaline earth silicate glass products — 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*

Annex B
(informative)

Summary of the characteristics

B.1 Summary of the characteristics of power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics

Table B.1 is informative and it is produced only to help the manufacturer with a summary of the characteristics addressed by this European Standard. It is to be underlined that each individual characteristic can be determined separately according to what the manufacturer intends to declare. Moreover, the determination of characteristics can only be carried out according to the provisions included in Clause 5 for the requirements given in Clause 4 of this European Standard.

Table B.1 — Information for determination of characteristics of power operated doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics

Clause	Characteristic	Reference standard	Test type [a]	Number of test specimens	Size of test specimen	Range of direct application
4.2	Rate of release of dangerous substances (indoor impact only)	As required by regulations				
4.3	Impact resistance (glazed doors with injury risk only)	EN 13049	Destructive	1 or 2	Not specified	> Overall area of test specimen (infill)
4.4	Height	Declared values				
4.5	Direct airborne sound insulation index (only for uses where acoustic performance is declared)	EN ISO 717-1 EN ISO 10140-2	Non-destructive or tabulated values	1	-	-
4.6	Impact forces (safety in use)	EN16005	Non-destructive	1	Most critical of the family	Family type
4.7	Water tightness (only for external doors)	EN 12208 EN 1027	Non-destructive	1	Not specified	-100 % to +50 % of test specimen overall area
4.8	Resistance to wind load (only for external doors)	EN 12210 EN 12211	Destructive	1	Not specified	-100 % of frame width and height of test specimen
4.9	Thermal transmittance for external doors and for internal doors where the thermal insulation is declared	EN ISO 10077-1 or EN ISO 10077-1 and EN ISO 10077-2	Calculation	— —	2,00 (±25%) m x 2,20 (±25%) m	All sizes
		EN ISO 12567-1	Non-destructive	1 1	2,00 (±25%) m x 2,20 (±25%) m	All sizes

Table B.1 — *(continued)*

Clause	Characteristic	Reference standard	Test type [a]	Number of test specimens	Size of test specimen	Range of direct application
4.10	Air permeability (only for external doors and for internal doors where thermal insulation is declared)	EN 12207 EN 1026	Non-destructive	1	Not specified	Weather stripping on four sides: -100 % to +50 % of test specimen overall area Weather stripping on three sides: -100 % of test specimen overall area

[a] Non-destructive test: Specimen may be used for another test.
Destructive test: Specimen cannot be used for another test.

Annex C
(informative)

Handling, installation, maintenance and care

The manufacturer shall provide information on the following:

— storage and handling, if the manufacturer is not responsible for installation of the product;

— installation requirements and techniques (on site), if the manufacturer is not responsible for installation of the product;

— maintenance and cleaning instructions including instructions on replacement of components needed for compliance with the declared characteristics.

Safety in use instructions are outlined in EN 16005.

Annex D
(informative)

Summary of classification of characteristics

In order to help the manufacturer a summary of the classification of the characteristics covered by this European Standard is given in Table D.1 for external doorsets, in Table D.2 for internal doorsets without thermal insulation and in Table D.3 for internal doorsets with thermal insulation.

NOTE Any characteristics which align vertically within Tables D.1, D.2 and D.3 are coincidental.

The manufacturer shall identify which characteristics have been determined and the level of performance declared.

In order to enable the specifier to determine whether or not a product is fit for a given intended use, the manufacturer shall provide the necessary product descriptions, e.g. intended use expressed as indicated in Clause 1 and in Table ZA.1, product range, range of application, information on durability.

Table D.1 — Classification of characteristics for external doorsets

No.	Clause	Characteristic/ value/dimension	Classification/value											
1	4.2	**Rate of release of dangerous substances** (only for indoor impact)		As required by regulations										
2	4.3	**Impact resistance** (only for glazed doors with injury risks)		**1**	**2**	**3**	**4**	**5**						
		Drop height (mm)		**200**	**300**	**450**	**700**	**950**						
3	4.4	**Height**		Declared value(s)										
4	4.5	**Direct airborne sound insulation index** (only for uses where acoustic performance is declared)		Declared value(s)										
		Weighed sound reduction index $R_w(C,C_{tr})$ (dB)												
5	4.6	**Impact forces (safety in use)**	- Results not exceeding the profile of the area given in the standard											
6	4.7	**Water tightness** (only for external doors)		**1 A**	**2 A**	**3 A**	**4 A**	**5 A**	(test pressure)					
		Non–shielded **(A)** Test pressure **(Pa)**		*(0)*	*(50)*	*(100)*	*(150)*	*(200)*	(*> 200)*					

Table D.1 *(continued)*

7	4.7	**Water tightness** (only for external doors)		**1 B**	**2 B**	**3 B**	**4 B**	**5 B**	(test pressure)		
		Shielded **(B)** Test pressure **(Pa)**		*(0)*	*(50)*	*(100)*	*(150)*	*(200)*	(> 200)		

8	4.8	**Resistance to wind load** (only for external doors)		**PPD0**	**PPD1**	**PPD2**	**PPD** (test pressure)			
		Test pressure P1 (Pa)		*(< 200)*	(200)	*(300)*	(> 300)			

9	4.8	**Resistance to wind load** (only for external doors)		**A**	**B**	**C**
		Frame deflection		*(≤ 1/150)*	*(≤ 1/200)*	*(≤ 1/300)*

10	4.9	**Thermal transmittance** (only for external doors and for internal doors where the thermal insulation is declared)		
		U_D (W/(m^2 · K))		Declared value

11	4.10	**Air permeability** (only for external doors and for internal doors where the thermal insulation is declared)		**PPD0**	**PPD1**	**PPD2**	**PPD** (test pressure and measured air permeability)	
		max. test pressure (Pa)		(< 150)	(150)	(300)	(> 300)	
		Reference air permeability at 100 Pa (m^3/(h · m^2)) or m^3/(h · m))		(> 50 or > 12,50)	(50 or 12,50)	(27 or 6,75)	(< 27 or < 6,75)	

12	4.11	**Durability of impact forces (safety in use) against ageing/degradation**	-	**PPD1**	**PPD2**	**PPD3**	**PPD**(number of cycles)
		(number of cycles)		200 000	500 000	1 000 000	> 1 000 000

NOTE The figures in brackets are for information.

Table D.2 — Classification of characteristics for internal doorsets with no thermal insulation

No.	Clause	Characteristic/ value/dimension		Classification/value					
1	4.2	**Rate of release of dangerous substances** (only for indoor impact)		As required by regulations					
2	4.3	**Impact resistance** (only for glazed doors with injury risks)		**1**	**2**	**3**	**4**	**5**	
		Drop height (mm)		**200**	**300**	**450**	**700**	**950**	
3	4.4	**Height**		Declared value(s)					
4	4.5	**Direct airborne sound insulation index** (only for uses where acoustic performance is declared)		Declared value(s)					
		Weighed sound reduction index $R_w(C,C_{tr})$ (dB)							
5	4.6	**Impact forces (safety in use)**	-	Results not exceeding the profile of the area given in the standard					
6	4.11	**Durability of impact forces (safety in use) against ageing/degradation**	-	**PPD1**	**PPD2**	**PPD3**	**PPD** (number of cycles)		
		(number of cycles)		200 000	500 000	1 000 000	> 1 000 000		

Table D.3 — Classification of characteristics for internal doorsets with thermal insulation

No.	Clause	Characteristic/ value/dimension	Classification/value					
1	4.2	**Rate of release of dangerous substances** (only for indoor impact)		As required by regulations				
2	4.3	**Impact resistance** (only for glazed doors with injury risks)		**1**	**2**	**3**	**4**	**5**
		Drop height (mm)		**200**	**300**	**450**	**700**	**950**
3	4.4	**Height**		Declared value(s)				
4	4.5	**Direct airborne sound insulation index** (only for uses where acoustic performance is declared)		Declared value(s)				
		Weighed sound reduction index $R_w(C,C_{tr})$ (dB)						
5	4.6	**Impact forces (safety in use)**	-	Results not exceeding the profile of the area given in the standard				
6	4.9	**Thermal transmittance** (only for external doors and for internal doors where the thermal insulation is declared)						
		U_D (W/(m^2 · K))		Declared value				
7	4.10	**Air permeability** (only for external doors and for internal doors where the thermal insulation is declared)		**PPD0**	**PPD1**	**PPD2**	**PPD** (tested pressure and measured air permeability)	
		max. test pressure (Pa)		(< 150)	(150)	(300)	(> 300)	
		Reference air permeability at 100 Pa (m^3/(h · m^2)) or m^3/(h · m))		(> 50 or > 12,50)	(50 or 12,50)	(27 or 6,75)	(< 27 or < 6,75)	
8	4.11	**Durability of impact forces (safety in use) against ageing/degradation**	-	**PPD1**	**PPD2**	**PPD3**	**PPD**(number of cycles)	
		(number of cycles)		200 000	500 000	1 000 000	> 1 000 000	

NOTE The figures in brackets are for information.

Annex ZA
(informative)

Clauses of this European Standard addressing the provisions of the EU Construction Products Directive

ZA.1 Scope and relevant characteristics

This European Standard has been prepared under Mandate M/101 Doors, windows, shutters, gates and related building hardware, amendments M/126, M/130, given to CEN by the European Commission and the European Free Trade Association.

The clauses of this European Standard shown in this annex meet the requirements of the mandate given under the EU Construction Products Directive (89/106/EEC).

Compliance with these clauses confers a presumption of fitness of the power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics covered by this annex for the intended uses indicated herein; reference shall be made to the information accompanying the CE marking.

This annex establishes the conditions for the CE marking of the power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics intended for the uses indicated in Tables ZA.1.1, ZA.1.2 and ZA.1.3 and shows the relevant clauses applicable.

This annex has the same scope as the relevant part in Clause 1 of this standard related to the aspect covered by the mandate and is defined by Tables ZA.1.1, ZA.1.2 and ZA.1.3.

Table ZA.1.1 — Relevant clauses for power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics for external use in escape routes and other declared specific uses and/or uses subject to other specific requirements, in particular noise, energy, tightness and safety-in-use in construction works

Product(s): external power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics, as detailed in Clause 1.

Intended use(s): for external use in escape routes and other declared specific uses and/or uses subject to other specific requirements, in particular noise, energy, tightness and safety-in-use in construction works

Essential characteristics	Requirement clauses in this and other European Standard	Levels and/or classes	Notes
Rate of release of dangerous substances (indoor impact only)	4.2		-
Impact resistance (glazed doors with injury risk only)	4.3		Class
Height	4.4		mm
Direct airborne sound insulation index (only for uses where acoustic performance is declared)	4.5		Weighed sound reduction index R_w (C,Ctr) (dB)
Impact forces (safety in use)	4.6		-
Water tightness (only for external doors)	4.7		Class
Resistance to wind load (only for external doors)	4.8		Class
Thermal transmittance (only for external doors and for internal doors where the thermal insulation is declared)	4.9		U_D (W/(m^2 · K))
Air permeability (only for external doors and for internal doors where the thermal insulation is declared)	4.10		Class
Durability of impact forces (safety in use) against: - aging/degradation	4.11		Class

Table ZA.1.2 — Relevant clauses for power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristicsfor internal use in escape routes, communication and other declared specific uses and/or uses subject to other specific requirements, in particular noise and safety-in-use in construction works

Product(s): internal power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics, as detailed in Clause 1.

Intended use(s): for internal use in escape routes, communication and other declared specific uses and/or uses subject to other specific requirements, in particular noise and safety-in-use in construction works
.

Essential characteristics	Requirement clauses in this and other European Standard	Levels and/or classes	Notes
Rate of release of dangerous substances (indoor impact only)	4.2		-
Impact resistance (glazed doors with injury risk only)	4.3		Class
Height	4.4		mm
Direct airborne sound insulation index (only for uses where acoustic performance is declared)	4.5		Weighed sound reduction index R_w (C,Ctr) (dB)
Impact forces (safety in use)	4.6		-
Durability of impact forces (safety in use) against: - aging/degradation	4.11		Class

Table ZA.1.3 — Relevant clauses for power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristicsfor internal use in escape routes, communication and other declared specific uses and/or uses subject to other specific requirements, in particular noise, energy and safety-in-use in construction works

Product(s): internal power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics, as detailed in Clause 1.

Intended use(s): for internal use in escape routes, communication and other declared specific uses and/or uses subject to other specific requirements, in particular noise, energy and safety-in-use in construction works.

Essential characteristics	Requirement clauses in this and other European Standard	Levels and/or classes	Notes
Rate of release of dangerous substances (indoor impact only)	4.2		-
Impact resistance (glazed doors with injury risk only)	4.3		Class
Height	4.4		mm
Direct airborne sound insulation index (only for uses where acoustic performance is declared)	4.5		Weighed sound reduction index R_w (C,Ctr) (dB)
Impact forces (safety in use)	4.6		-
Thermal transmittance (only for external doors and for internal doors where the thermal insulation is declared)	4.9		U_D (W/(m^2 · K))
Air permeability (only for external doors and for internal doors where the thermal insulation is declared)	4.10		Class
Durability of impact forces (safety in use) against: - aging/degradation	4.11		Class

The requirement on a certain characteristic is not applicable in those Member States (MSs) where there are no regulatory requirements on that characteristic for the intended use of the product. In this case, manufacturers placing their products on the market of these MSs are not obliged to determine nor declare the performance of their products with regard to this characteristic and the option “No performance determined”

(NPD) in the information accompanying the CE marking (see ZA.3) may be used. The NPD option may not be used, however, where the characteristic is subject to a threshold level.

ZA.2 Procedure for the attestation of conformity of power operated doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics

ZA.2.1 System(s) of attestation of conformity

The system(s) of attestation of conformity of the power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics indicated in Table ZA.1.1 to Table ZA.1.3, established by EU Decision 1999/93/EC (OJEU L29 of 3.2.99) as amended, by EC decision 2011/246/EU (OJEU L103 of 19-04-2011) as given in Annex III of the Mandate M/101, is shown in Table ZA.2 for the indicated intended use(s) and relevant level(s) or class(es).

Table ZA.2 — System of attestation of conformity (AoC) for power operated pedestrian doorsets other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics

Products	Intended use(s)	Levels or class(es)	Attestation of conformity system(s)
Doors and gates (with or without related hardware)	fire/smoke compartmentation and on escape routes		1
	other declared specific uses and/or uses subject to other specific requirements, in particular noise, energy, tightness and safety-in-use (i.e. NOT for fire/smoke compartmentation, NOT for escape routes)		3
	For internal communication only		4
System 1: See CPD Annex III.2.(i), without audit testing of samples System 3: See CPD Annex III.2.(ii), Second possibility System 4: See CPD Annex III.2.(ii), Third possibility			

The attestation of conformity of the power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics in Table ZA.1.1 to Table ZA.1.3 shall be according to the evaluation of conformity procedures indicated in Table ZA.3.1 to Table ZA.3.3 resulting from application of the clauses of this or other European Standard indicated therein.

Table ZA.3.1 — Assignment of evaluation of conformity tasks for power operated pedestrian doorsets other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics under system 1

Tasks		Content of the task	Evaluation of conformity clauses to apply
Tasks under the responsibility of the manufacturer	Factory production control (FPC)	Parameters related to EC of Table ZA.1 relevant for the intended use which are declared	6.3
	Further testing of samples taken at factory according to the prescribed test plan	EC of Table ZA.1 relevant for the intended use which are declared	6.3.2.7
Tasks under the responsibility of the product certification body	Initial type testing	EC of Table ZA.1 relevant for the intended use which are declared	6.2
	Initial inspection of factory and of FPC	Parameters related to EC of Table ZA.1, relevant for the intended use which are declared Documentation of FPC	6.3.4
	Continuous surveillance, assessment and approval of FPC	Parameters related to EC of Table ZA.1, relevant for the intended use which are declared and documentation of FPC	6.3.5

Table ZA.3.2 — Assignment of evaluation of conformity tasks for power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics under system 3

Tasks		Content of the task	Evaluation of conformity clauses to apply
Tasks under the responsibility of the manufacturer	Factory production control (FPC)	Parameters related to EC of Table ZA.1 relevant for the intended use which are declared	6.3
Tasks under responsibility of a notified laboratory	Initial type testing	EC of Table ZA.1 relevant for the intended use which are declared	6.2

Table ZA.3.3 — Assignment of evaluation of conformity tasks for power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics under system 4

Tasks		Content of the task	Evaluation of conformity clauses to apply
Tasks under the responsibility of the manufacturer	Factory production control (FPC)	Parameters related to EC of Table ZA.1 relevant for the intended use	6.3
	Initial type testing by the manufacturer	EC of Table ZA.1 relevant for the intended use which are declared	6.2

ZA.2.2 EC Certificate and Declaration of conformity

ZA.2.2.1 Products with system 1

When compliance with the conditions of this annex is achieved, the certification body shall draw up the EC Certificate of conformity, which entitles the manufacturer to affix the CE marking. The EC Certificate of conformity shall include:

— name, address and identification number of the certification body;

— name and address of the manufacturer, or his authorised representative established within the EEA and place(s) of production;

NOTE The manufacturer may also be the person responsible for placing the product onto the EEA market, if he takes responsibility for CE marking.

— description of the product (type, identification, use, etc.);

— provisions to which the product conforms (i.e. Annex ZA of this European Standard);

— particular conditions applicable to the use of the product (e.g. provisions for use under certain conditions);

— the number of the certificate;

— conditions of validity of the certificate, where applicable;

— name of, and position held by, the person empowered to sign the certificate.

The above mentioned EC Certificate of conformity shall be presented in the language or languages accepted in the Member State in which the product is to be used.

ZA.2.2.2 Products under system 3

When compliance with the conditions of this annex is achieved, the manufacturer, or his agent established in the EEA, shall draw up and retain the EC Declaration of conformity, which entitles the manufacturer to affix the CE marking. This EC Declaration of conformity shall include:

— name and address of the manufacturer, or his authorised representative established within the EEA, and place(s) of production;

NOTE 1 The manufacturer may also be the person responsible for placing the product onto the EEA market, if he takes responsibility for CE marking.

— description of the product (type, identification, use, etc.) and a copy of the information accompanying the CE marking;

NOTE 2 Where some of the information required for the Declaration is already given in the CE marking information, it does not need to be repeated.

— provisions to which the product conforms (i.e. Annex ZA of this European Standard) and a reference to the ITT report(s) and factory production control records (if appropriate);

— particular conditions applicable to the use of the product (e.g. provisions for use under certain conditions);

— name and address of the notified laboratory(ies);

— name of, and position held by, the person empowered to sign the declaration on behalf of the manufacturer or his authorised representative.

The above mentioned EC Declaration of conformity shall be presented in the language or languages accepted in the Member State in which the product is to be used.

ZA.2.2.3 Products under system 4

When compliance with this annex is achieved, the manufacturer or his agent established in the EEA shall draw up and retain the EC Declaration of conformity, which entitles the manufacturer to affix the CE marking. This EC Declaration of conformity shall include:

— name and address of the manufacturer, or his authorised representative established in the EEA, and place of production;

NOTE 1 The manufacturer may also be the person responsible for placing the product onto the EEA market, if he takes responsibility for CE marking.

— description of the product (type, identification, use,...), and a copy of the information accompanying the CE marking;

NOTE 2 Where some of the information required for the Declaration is already given in the CE marking information, it does not need to be repeated.

— provisions to which the product conforms (i.e. Annex ZA of this EN), and a reference to the ITT report(s) and factory production control records (if appropriate);

— particular conditions applicable to the use of the product (e.g. provisions for use under certain conditions);

— name of, and position held by, the person empowered to sign the declaration on behalf of the manufacturer or of his authorised representative.

The above-mentioned EC Declaration of conformity shall be presented in the language or languages accepted in the Member State in which the product is to be used.

ZA.3 CE marking and labelling

The manufacturer or his authorised representative established within the EEA is responsible for the affixing of the CE marking. The CE marking symbol to affix shall be in accordance with Directive 93/68/EEC and shall be shown on the power operated pedestrian doorsets, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics.

The following information shall accompany the CE marking symbol:

— For products covered by system 1:

a) identification number of the certification body;

b) name or identifying mark of the manufacturer;

c) the last two digits of the year in which the marking is affixed;

d) number of the EC Certificate of conformity or factory production control certificate (if relevant);

e) reference to this European Standard;

f) description of the product.

Information on those relevant essential characteristics listed in Table ZA.1.1, which are to be declared as indicated in Table ZA.1.1, can be listed in the accompanying documents.

— For products covered by system 3 and 4:

g) name or identifying mark of the manufacturer;

h) the last two digits of the year in which the marking is affixed;

i) reference to this European Standard;

j) description of the product.

Information on those relevant essential characteristics listed in Table ZA.1.2 or Table ZA.1.3, which are to be declared as indicated in Table ZA.1.2 or Table ZA.1.3, can be listed in the accompanying documents.

The “No performance determined” (NPD) option may not be used for durability and where the characteristic is subject to a threshold level. Otherwise, the NPD option may be used when and where the characteristic, for a given intended use, is not subject to regulatory requirements in the Member State of destination.

Figure ZA.1 gives an example of the information related to products subject to attestation of conformity system 1, to be given on the product.

Figure ZA.2 gives an example of the information related to products subject to attestation of conformity system 3, to be given on the product.

Figure ZA.3 gives an example of the information related to products subject to attestation of conformity system 4, to be given on the product.

CE 01234	*CE marking, consisting of the "CE"-symbol given in Directive 93/68/EEC.* *Identification number of the certification body*
AnyCo Ltd, PO Box 21, B-1050 **13** 01234-CPD-00234	*Name or identifying mark and registered address of the producer* *Last two digits of the year in which the marking was affixed* *EC Certificate of conformity number*
EN 16361 Power operated pedestrian doorset, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics for external use in escape routes	*No. of European Standard* *Description of product*

Figure ZA.1 — Example CE marking information on the product relevant to AoC system 1

CE	*CE marking, consisting of the "CE"-symbol given in Directive 93/68/EEC.*
AnyCo Ltd, PO Box 21, B-1050 **13**	*Name or identifying mark and registered address of the producer* *Last two digits of the year in which the marking was affixed*
EN 16361 Power operated pedestrian doorset, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics for internal use subject to energy requirements	*No. of European Standard* *Description of product*

Figure ZA.2 — Example CE marking information on the product relevant to AoC system 3

CE	*CE marking, consisting of the "CE"-symbol given in Directive 93/68/EEC.*
AnyCo Ltd, PO Box 21, B-1050 **13**	*Name or identifying mark and registered address of the producer* *Last two digits of the year in which the marking was affixed*
EN 16361 Power operated pedestrian doorset, other than swing type, initially designed for installation with power operation without resistance to fire and smoke leakage characteristics for internal communication	*No. of European Standard* *Description of product*

Figure ZA.3 — Example CE marking information on the product relevant to AoC system 4

Annex ZB
(informative)

Relationship between this European Standard and the Essential Requirements of the EMC Directive

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association and within its scope the standard covers protection requirements of Annex I Article 1 of the:

Electromagnetic Compatibility Directive 2004/108/EC

Compliance with 4.12 of this European Standard provides presumption of conformity with the specified essential requirements of the Directive concerned.

NOTE Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this European Standard.

Bibliography

[1] EN 13241-1, *Industrial, commercial and garage doors and gates — Product standard — Part 1: Products without fire resistance or smoke control characteristics*

[2] prEN 14351-2, *Windows and doors — Product standard, performance characteristics — Part 2: Internal pedestrian doorsets without resistance to fire and/or smoke leakage characteristics*

[3] prEN 16034, *Pedestrian doorsets, industrial, commercial, garage doors and windows — Product standard, performance characteristics — Fire resistance and/or smoke control characteristics*

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

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

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

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