



# SLOVENSKI STANDARD

## oSIST prEN 14351-1:2019

01-november-2019

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### Okna in vrata - Standard za proizvod, zahtevane lastnosti - 1. del: Okna in zunanja vrata

Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets

Fenster und Türen - Produktnorm, Leistungseigenschaften - Teil 1: Fenster und Außentüren

Fenêtres et portes - Norme produit, caractéristiques de performance - Partie 1 : Fenêtres et blocs portes extérieurs pour piétons

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#### **ICS:**

91.060.50      Vrata in okna

Doors and windows

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

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**prEN 14351-1**

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English Version

## Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets

Fenêtres et portes - Norme produit, caractéristiques de performance - Partie 1 : Fenêtres et blocs portes extérieurs pour piétons

Fenster und Türen - Produktnorm, Leistungseigenschaften - Teil 1: Fenster und Außentüren

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 33.

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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

<b>Contents</b>	<b>Page</b>
European foreword.....	7
<b>1 Scope</b> .....	<b>10</b>
<b>2 Normative references</b> .....	<b>11</b>
2.1 Classification standards.....	11
2.2 Test and calculation standards .....	11
2.3 Other standards.....	14
<b>3 Terms, definitions and symbols</b> .....	<b>14</b>
3.1 Terms and definitions .....	15
3.2 Symbols.....	16
<b>4 Product characteristics</b> .....	<b>16</b>
4.1 Reaction to fire of components of the product.....	16
4.2 External fire performance (only for roof windows).....	17
4.3 Release of dangerous substances (only for emissions into indoor air) .....	17
4.4 Impact resistance (where relevant, only for windows and glazed external pedestrian doorsets with injury risk) .....	18
4.5 Height of external pedestrian doorsets .....	18
4.6 Acoustic performance (when required).....	18
4.7 Ability to release (to open) (only for locked doors in escape routes) .....	18
4.8 Watertightness.....	18
4.9 Resistance to wind load .....	18
4.9.1 Resistance to wind load for windows and external pedestrian doorsets.....	19
4.9.2 Resistance to wind load for external shutter and blinds.....	19
4.10 Thermal transmittance (only for uses where thermal performance is required) .....	19
4.11 Air permeability .....	19
4.12 Radiation properties.....	19
4.13 Load-bearing capacity of safety devices (only for windows and roof windows) .....	19
4.14 Mechanical resistance to snow and permanent load (only for roof windows) .....	20
4.14.1 General.....	20
4.14.2 Description of infill.....	20
4.14.3 Integrity.....	20
4.15 Operating forces (only for automatic devices and external pedestrian doors for special uses and specific requirements).....	20
4.16 Frame area ratio FF (only for windows).....	20
4.17 Child safety (only for risk of falling from height) .....	20
4.17.1 General.....	20
4.17.2 Lockable devices.....	21
4.17.3 Safety restrictors .....	21
4.18 Durability.....	21
4.18.1 General.....	21
4.18.2 Durability of ability to release (only for doors in escape routes) .....	21
4.18.3 Durability of operating forces (only for automatic devices).....	21
4.19 Total solar energy transmittance (solar factor), for windows with or without incorporated shutters and/or shutter boxes and/or blinds .....	21
4.20 Light transmittance (light factor) for windows with or without incorporated shutters and/or shutter boxes and/or blinds.....	22
4.21 Manual operating forces.....	22
4.22 Mechanical strength.....	22

4.23	Ventilation.....	22
4.24	Bullet resistance .....	22
4.25	Explosion resistance.....	23
4.25.1	General .....	23
4.25.2	Shock tube .....	23
4.25.3	Range test .....	23
4.26	Resistance to repeated opening and closing.....	23
4.27	Behaviour between different climates .....	23
4.27.1	Windows .....	23
4.27.2	External pedestrian doorsets.....	23
4.28	Burglar resistance .....	23
4.29	Mechanical performance of bonded glazing (only relevant for products in which glazed infills are bonded) .....	24
4.29.1	Bond strength.....	24
4.29.2	Resistance of the bonding against moisture .....	24
4.29.3	Durability of the bond strength.....	24
4.30	Requirements on unframed external pedestrian doorsets made of glass .....	24
4.31	Requirements on power operated windows .....	24
4.31.1	General .....	24
4.31.2	Safety in use .....	24
4.31.3	Electromagnetic Compatibility (EMC).....	24
4.32	Requirements on power operated external pedestrian doorsets .....	25
4.32.1	General .....	25
4.32.2	Safety in use (only for automatic devices).....	25
5	Testing, assessment and sampling methods.....	25
5.1	Reaction to fire of components of the product.....	25
5.2	External fire performance (only for roof windows) .....	25
5.3	Release of dangerous substances (only for emissions into indoor air) .....	25
5.4	Impact resistance (where relevant, only for windows and glazed external pedestrian doorsets with injury risk).....	26
5.5	Height of external pedestrian doorsets.....	26
5.6	Acoustic performance (when required).....	26
5.6.1	Reference method .....	26
5.6.2	Alternative method.....	26
5.7	Ability to release (to open) (only for external pedestrian doorsets in escape routes).....	26
5.7.1	Assessment of the construction.....	26
5.7.2	Other hinges .....	27
5.8	Watertightness .....	27
5.9	Resistance to wind load.....	27
5.9.1	Windows and external pedestrian doorsets.....	27
5.9.2	Shutters and external blinds .....	27
5.10	Thermal transmittance (only for uses where thermal performance is required).....	27
5.10.1	Testing of windows with or without shutterboxes and external pedestrian doorsets .....	27
5.10.2	Tabulated values of windows.....	28
5.10.3	Calculation of windows with or without shutterboxes and external pedestrian doorsets.....	28
5.10.4	Testing of windows with incorporated shutters and/or blinds .....	28
5.10.5	Calculation of windows with incorporated shutters and/or blinds.....	28
5.11	Air permeability .....	29
5.12	Radiation properties .....	29
5.13	Load-bearing capacity of safety devices (only for windows and roof windows).....	29
5.14	Mechanical resistance to snow and permanent load (only for roof windows) .....	29

## prEN 14351-1:2019 (E)

5.15	Operating forces (only for automatic devices and external pedestrian doors for special uses and specific requirements).....	29
5.16	Frame area ratio FF (only for windows).....	30
5.17	Child safety (only for risk of falling from height).....	30
5.18	Durability.....	30
5.18.1	Durability of Watertightness.....	30
5.18.2	Durability of air permeability.....	30
5.18.3	Durability of thermal transmittance.....	30
5.19	Total solar energy transmittance (solar factor), for the window with or without incorporated shutters and/or shutter boxes and/or blinds.....	30
5.20	Light transmittance (light factor) for the window with or without incorporated shutters and/or shutter boxes and/or blinds.....	31
5.21	Manual operation forces.....	31
5.22	Mechanical strength.....	31
5.23	Ventilation.....	32
5.24	Bullet resistance.....	32
5.25	Explosion resistance.....	32
5.25.1	Shock tube.....	32
5.25.2	Range test.....	32
5.26	Resistance to repeated opening and closing.....	32
5.27	Behaviour between different climates.....	32
5.27.1	Windows.....	32
5.27.2	External pedestrian doorsets.....	32
5.28	Burglar resistance.....	32
5.29	Mechanical performance of bonded glazing (only relevant for products in which glazed infills are bonded).....	32
5.29.1	Bond strength.....	32
5.29.2	Resistance against moisture.....	33
5.29.3	Durability of the bond strength.....	33
6	Assessment and verification of constancy of performance —AVCP.....	33
6.1	General.....	33
6.2	Type testing.....	33
6.2.1	General.....	33
6.2.2	Test samples, testing and compliance criteria.....	34
6.2.3	Test reports.....	34
6.2.4	Shared other party results.....	34
6.2.5	Cascading determination of the product type results.....	35
6.3	Factory production control (FPC).....	36
6.3.1	General.....	36
6.3.2	Requirements.....	37
6.3.3	Product specific requirements.....	39
6.3.4	Initial inspection of factory and of FPC.....	39
6.3.5	Continuous surveillance of FPC.....	40
6.3.6	Procedure for modifications.....	40
6.3.7	One-off products, pre-production products (e.g. prototypes) and products produced in very low quantity.....	40
	Annex A (informative) Interdependence between characteristics and components.....	42
	Annex B (normative) Determination of acoustic performance of windows.....	45
B.1	General.....	45
B.2	Determination of sound insulation by testing.....	45

B.3	Determination of sound insulation of single windows with IGUs using tabulated values .....	46
B.3.1	Sound insulation of single windows based on IGU sound insulation data and window construction criteria.....	46
B.3.2	General conditions for use of procedure in B.3.3.....	46
B.3.3	Procedure for determination of window $R_W$ ( $C$ ; $C_{tr}$ ) based on IGU data.....	46
B.4	Test results and tabulated values – Range of application.....	48
B.5	Interpolation procedure for determining the sound insulation of windows based on data for the IGU and measured test results of complete windows .....	48
Annex C	(normative) Tabulated values and extension of results following size and design variations.....	51
C.1	Characteristics for windows .....	51
C.2	Characteristics for external pedestrian doorsets.....	54
Annex D	(informative) Optional selection of representative test specimens for windows.....	57
D.1	Guidelines for an optional selection of representative test specimens.....	57
Annex E	(informative) Examples of test sequences for optional combined determination of characteristics for windows.....	59
E.1	Optional test sequences .....	59
Annex F	(normative) Selection, preparation mounting and fixing of test specimen for reaction to fire tests of windows or external pedestrian doorsets and field of direct application .....	60
F.1	General .....	60
F.2	EN ISO 11925-2 (Single flame test) .....	60
F.2.1	Profile.....	60
F.2.2	Infill or door leaf board .....	62
F.2.3	Sealant and/or gasket between infill and profile .....	62
F.2.4	Organic coating/top layers.....	64
F.3	Mounting and fixing for EN 13823 (SBI-test).....	64
F.3.1	Testing of the individual components.....	64
F.3.2	Testing of the window or external pedestrian doorset .....	65
F.4	EN ISO 1182 (Non-combustibility test).....	67
F.5	EN ISO 1716 (Determination of the heat of combustion).....	67
F.6	Field of direct application.....	67
Annex G	(normative) Air permeability — Determination in accordance with constructive details.....	69
Annex H	(normative) Application procedures for resistance to wind load on windows and external pedestrian doorsets with framed door leaves with larger sizes than type tested.....	70
Annex I	(normative) Thermal transmittance for windows with bars .....	71

## prEN 14351-1:2019 (E)

<b>Annex J (informative) Classifications/values of individual characteristics.....</b>	<b>73</b>
<b>Annex ZA (informative) Relationship of this European Standard with Regulation (EU) No. 305/2011.....</b>	<b>79</b>
<b>ZA.1 Scope and relevant characteristics.....</b>	<b>79</b>
<b>ZA.2 System of Assessment and Verification of Constancy of Performance (AVCP).....</b>	<b>84</b>
<b>ZA.3 Assignment of AVCP tasks.....</b>	<b>84</b>
<b>Annex ZB (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC .....</b>	<b>89</b>
<b>Annex ZC (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2014/30/EU.....</b>	<b>90</b>
<b>Bibliography.....</b>	<b>91</b>

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[oSIST prEN 14351-1:2019](https://standards.iteh.ai/catalog/standards/sist/8c8059e3-31a4-4457-8d73-800e0d573f31/osist-pren-14351-1-2019)

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## European foreword

This document (prEN 14351-1:2019) has been prepared by Technical Committee CEN/TC 33 “Doors, windows, shutters, building hardware and curtain walling”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 14351-1:2006+A2:2016.

Compared with EN 14351-1:2006+A2:2016, the following changes have been made:

- a) the scope has been changed and now covers roof windows for installation in inclined roofs and power operated external pedestrian hinged doorsets;
- b) normative references were updated;
- c) subclause 3.1, new terms and definitions have been added to for French windows (3.1.7), bonded glazing (3.1.8) and direct glazing (3.1.9);
- d) subclause 3.2 Symbols has been added;
- e) the former Clause 4 has been transformed in two clauses:
  - 1) Clause 4 Product characteristics;
  - 2) Clause 5 Testing, assessment and sampling methods;
- f) clarifications have been added for fixed windows and windows with incorporated shutters and/or shutter boxes and/or blinds.
- g) numerous editorial changes.
- h) the following essential characteristics are new:
  - 1) reaction to fire for windows and doors (was before: only for roof windows);
  - 2) frame area ratio FF;
  - 3) child safety (only for risk of falling from height);
  - 4) operating forces (only for automatic devices and external pedestrian doors for special uses and specific requirements) (4.15);
- i) subclause 4.5 Width deleted;
- j) subclause 4.7 Ability to release is clarified as “to open” and additional provisions for assessing hinges not covered by EN 1935 were added;
- k) subclause 4.9 Resistance to wind load for external shutters and blinds were added;
- l) subclause 4.10, 4.12, 4.19, 4.20 Thermal transmittance and radiation properties including shutterbox, shutters, blinds were added (only for windows);

**prEN 14351-1:2019 (E)**

- m) subclause 4.13 Load bearing capacity of safety devices specified only for windows;
- n) subclause 4.14 Mechanical resistance to snow and permanent load (only for roof windows) has additional provisions for assessing the resistance of the roof window against impact from the outside, if relevant;
- o) subclause 4.18 Provisions for assessing the durability of operating forces (only for automatic devices) have been added;
- p) subclause 4.24 Bullet resistance, rules of applying results for similar design were added;
- q) subclause 4.29 Provisions for assessing bonded glazing have been added;
- r) subclause 4.31 Provisions for power operated windows and referenced standards have been updated;
- s) subclause 4.32 Requirements on power operated external pedestrian doorsets have been added;
- t) Clause 5 has been aligned to the characteristics specified in the Clause 4 and has additional provisions where relevant;
- u) Clause 6 Assessment and verification of constancy of performance — AVCP has been revised according to the new template and contains the provisions of the former Clauses 7 and 8;
- v) most annexes have been renumbered.
- w) Annex A has been amended to new the new elements of Clause 4;
- x) Annex B has additional provisions for the interpolation of glazings different than tested;
- y) Annex C is amending provisions of the former Annex E;
- z) former Annex C (that listed standards for glazings (informative)) has been deleted;
- aa) former Annex D (dealing with Examples of performance and requirement profiles of a roof window (informative)) has been deleted;
- bb) Annex F (former Annex H) has been updated and amended with provisions for windows and external pedestrian doorsets;
- cc) Annex H (new) has application procedures for resistance to wind load on windows and external pedestrian doorsets with framed door leaves with larger sizes than type tested;
- dd) Annex J Classifications/values of individual characteristics has been amended to new the new elements of Clause 4;
- ee) Annex ZA has been changed significantly to conform with the new template.

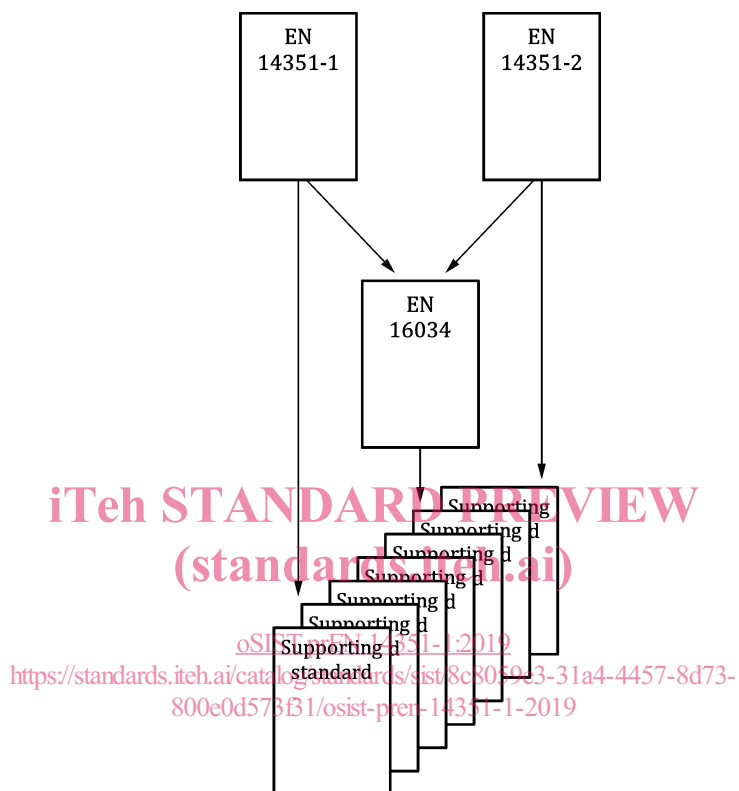
This document has been prepared under a standardization request given to CEN and CENELEC by the European Commission and the European Free Trade Association, and supports Basic Work Requirements of EU Regulation and essential requirements of EU Directive(s) and EU Regulations.

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

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

EN 14351-1 alone, applies to all windows and external pedestrian doorsets except resistance to fire and smoke control characteristics.

For the windows and external pedestrian doorsets having fire resisting and/or smoke control characteristics, EN 16034 applies in conjunction with EN 14351-1.



**Figure 1 — Relationship between various standard**

**prEN 14351-1:2019 (E)****1 Scope**

This document identifies material independent performance characteristics, except resistance to fire and smoke control characteristics, that are applicable to windows (including roof windows, roof windows with external fire resistance and door height windows), external pedestrian doorsets (including unframed glass doorsets, escape route doorsets and their assemblies).

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

This document applies to

- fixed windows or fixed lights, manually or power operated windows, French windows and screens for installation in vertical wall apertures and roof windows for installation in inclined roofs, complete with:
  - related hardware, if any;
  - weather stripping, if any;
  - glazed apertures when intended to have glazed apertures;
  - with or without incorporated shutters and/or shutter boxes and/or blinds;
 and manually or power operated windows, roof windows, French windows and screens that are:
  - fully or partially glazed including any non-transparent infill;
  - fixed or partly fixed or openable with one or more casements/sashes (e.g. hinged, projecting, pivoted, sliding);
- manually operated external pedestrian doorsets or power operated external pedestrian hinged doorsets with flush or panelled leaves in construction works, complete with:
  - integral fanlights, if any;
  - adjacent parts that are contained within a single frame for inclusion in a single aperture, if any.

The windows covered by this document are not assessed regarding their ability to release (to open).

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

This document does not apply to:

- rooflights according to EN 1873 and EN 14963;
- curtain walling according to EN 13830;
- industrial, commercial and garage doors and gates according to EN 13241;
- internal pedestrian doorsets according to EN 14351-2;
- revolving doorsets;
- power operated pedestrian doorsets according to EN 16361;
- windows intended to be part of internal partition.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

### 2.1 Classification standards

EN 1192, *Doors — Classification of strength requirements*

EN 1522:1998, *Windows, doors, shutters and blinds — Bullet resistance — Requirements and classification*

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

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

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

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

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

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

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

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

EN 13115, *Windows — Classification of mechanical properties — Racking, torsion and operating forces*

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

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

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

EN 13501-5, *Fire classification of construction products and building elements — Part 5: Classification using data from external fire exposure to roofs tests*

### 2.2 Test and calculation standards

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 410:2011, *Glass in building — Determination of luminous and solar characteristics of glazing*

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*

**prEN 14351-1:2019 (E)**

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

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

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

EN 1027, *Windows and doors — Watertightness — 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*

CEN/TS 1187, *Test methods for external fire exposure to roofs*

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

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

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 1670, *Building hardware — Corrosion resistance — Requirements and test methods*

EN 12046-1, *Operating forces — Test method — Part 1: Windows*

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

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

EN ISO 12354-3, *Building acoustics — Estimation of acoustic performance of buildings from the performance of elements — Part 3: Airborne sound insulation against outdoor sound (ISO 12354-3)*

EN 12758:2011, *Glass in building — Glazing and airborne sound insulation — Product descriptions and determination of properties*

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

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

EN 13126-5:2011+A1:2014, *Building hardware — hardware for windows and door height windows — Requirements and test methods — Part 5: Devices that restrict the opening of windows and door height windows*

EN 13141-1:2019, *Ventilation for buildings — Performance testing of components/products for residential ventilation — Part 1: Externally and internally mounted air transfer devices*

- EN 13238, *Reaction to fire tests for building products — Conditioning procedures and general rules for selection of substrates*
- EN 13363-1, *Solar protection devices combined with glazing — Calculation of solar and light transmittance — Part 1: Simplified method*
- EN 13363-2:2005, *Solar protection devices combined with glazing — Calculation of total solar energy transmittance and light transmittance — Part 2: Detailed calculation method*
- EN 13363-2:2005/AC:2006, *Solar protection devices combined with glazing — Calculation of total solar energy transmittance and light transmittance — Part 2: Detailed calculation method*
- EN 13420, *Windows — Behaviour between different climates — Test method*
- EN 13823, *Reaction to fire tests for building products — Building products excluding floorings exposed to the thermal attack by a single burning item*
- EN 14608, *Windows — Determination of the resistance to racking*
- EN 14609, *Windows — Determination of the resistance to static torsion*
- 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*
- prEN 16759:2017, *Bonded glazing for doors, windows and curtain walling — Verification of mechanical performance of bonding*
- <https://standards.iteh.ai/catalog/standards/sist/8c8059e3-31a4-4457-8d73-600002151051/pr-en-14351-1-2019>
- 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 717-1:2013, *Acoustics — Rating of sound insulation in buildings and of building elements — Part 1: Airborne sound insulation (ISO 717-1)*
- EN ISO 10077-1:2017, *EN ISO 10077-1:2006 and EN ISO 10077-1:2000 Thermal performance of windows, doors and shutters — Calculation of thermal transmittance — Part 1: General (ISO 10077-1:2017)*
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