

Nederlandse norm

NEN-EN 14351-1+A1

(en)

Ramen en deuren - Productnorm - Prestatie-eisen - Deel 1: Ramen en deuren zonder brand- en rookwerende eigenschappen

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

Vervangt NEN-EN 14351-1:2006;
NEN-EN 14351-1:2006/Ontw. A1:2009

ICS 91.060.50
maart 2010

Als Nederlandse norm is aanvaard:
 - EN 14351-1:2006+A1:2010, IDT

Voorbeeld
 Preview

Normcommissie 353641 "Deuren en ramen, begeleiding CEN/TC 33/WG 1 en 2"

Apart from exceptions provided by the law, nothing from this publication may be duplicated and/or published by means of photocopy, microfilm, storage in computer files or otherwise, which also applies to full or partial processing, without the written consent of the Netherlands Standardization Institute.

The Netherlands Standardization Institute shall, with the exclusion of any other beneficiary, collect payments owed by third parties for duplication and/or act in and out of law, where this authority is not transferred or falls by right to the Reproduction Rights Foundation.

Auteursrecht voorbehouden. Behoudens uitzondering door de wet gesteld mag zonder schriftelijke toestemming van het Nederlands Normalisatie-instituut niets uit deze uitgave worden verveelvoudigd en/of openbaar gemaakt door middel van fotokopie, microfilm, opslag in computerbestanden of anderszins, hetgeen ook van toepassing is op gehele of gedeeltelijke bewerking.

Het Nederlands Normalisatie-instituut is met uitsluiting van ieder ander gerechtigd de door derden verschuldigde vergoedingen voor verveelvoudiging te innen en/of daartoe in en buiten rechte op te treden, voor zover deze bevoegdheid niet is overgedragen c.q. rechtens toekomt aan de Stichting Reprorecht.

Although the utmost care has been taken with this publication, errors and omissions cannot be entirely excluded. The Netherlands Standardization Institute and/or the members of the committees therefore accept no liability, not even for direct or indirect damage, occurring due to or in relation with the application of publications issued by the Netherlands Standardization Institute.

Hoewel bij deze uitgave de uiterste zorg is nagestreefd, kunnen fouten en onvolledigheden niet geheel worden uitgesloten. Het Nederlands Normalisatie-instituut en/of de leden van de commissies aanvaardden derhalve geen enkele aansprakelijkheid, ook niet voor directe of indirecte schade, ontstaan door of verband houdend met toepassing van door het Nederlands Normalisatie-instituut gepubliceerde uitgaven.

EUROPEAN STANDARD

EN 14351-1:2006+A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2010

ICS 91.060.50

Supersedes EN 14351-1:2006

English Version

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

Fenêtres et portes - Norme produit, caractéristiques de performance - Partie 1: Fenêtres et blocs portes extérieurs pour piétons sans caractéristiques de résistance au feu et/ou dégagement de fumée

Fenster und Türen - Produktnorm, Leistungseigenschaften - Teil 1: Fenster und Außentüren ohne Eigenschaften bezüglich Feuerschutz und/oder Rauchdichtheit

This European Standard was approved by CEN on 3 February 2006 and includes Amendment 1 approved by CEN on 31 January 2010.

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 Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.


CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

	Page
Foreword.....	5
1 Scope.....	8
2 Normative references.....	9
2.1 Classification standards.....	9
2.2 Test and calculation standards.....	9
2.3 Other standards.....	11
3 Terms and definitions.....	12
4 Performance characteristics and special requirements.....	13
4.1 General.....	13
4.2 Resistance to wind load.....	13
4.3 Resistance to snow and permanent load.....	13
4.4 Fire characteristics.....	13
4.5 Watertightness.....	13
4.6 Dangerous substances.....	14
4.7 Impact resistance.....	14
4.8 Load-bearing capacity of safety devices.....	14
4.9 Height and width of doorsets and French windows.....	14
4.10 Ability to release.....	14
4.11 Acoustic performance.....	14
4.12 Thermal transmittance.....	14
4.13 Radiation properties.....	15
4.14 Air permeability.....	15
4.15 Durability.....	15
4.16 Operating forces.....	16
4.17 Mechanical strength.....	16
4.18 Ventilation.....	16
4.19 Bullet resistance.....	17
4.20 Explosion resistance.....	17
4.21 Resistance to repeated opening and closing.....	17
4.22 Behaviour between different climates.....	17
4.23 Burglar resistance.....	17
4.24 Special requirements.....	17
5 Classification and designation.....	18
6 Handling, installation, maintenance and care.....	23
7  Evaluation of conformity.....	23
7.1 General.....	23
7.2 Initial Type Testing (ITT).....	23
7.3 Factory Production Control (FPC).....	26
7.4 Initial inspection of factory and FPC.....	28
7.5 Continuous surveillance, assessment and approval of FPC.....	28
7.6 Testing of samples taken at the factory in accordance with a prescribed plan 	29
8 Labelling and marking.....	29
Annex A (informative) Interdependence between characteristics and components.....	30
Annex B (normative) Determination of sound insulation of windows.....	33
Annex C (informative) Standards and draft standards on glass.....	37
Annex D (informative) Examples of performance and requirement profiles of a roof window.....	38

Annex E (normative) Determination of characteristics	40
Annex F (informative) Optional selection of representative test specimens for windows	44
Annex G (informative) Examples of test sequences for optional combined determination of characteristics for windows	46
Annex H (normative) Selection, preparation, mounting and fixing of test specimen for testing roof windows in accordance with EN 13823 and EN ISO 11925-2 and field of direct application	47
Annex I (normative) Classification of air permeability of products with described product characteristics	50
Annex J (normative) Thermal transmittance for windows with bars	51
Annex ZA (informative) Clauses of this European Standard addressing the provisions of the EU Construction Product Directive	53
Annex ZB (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC	68
Annex ZC (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/95/EC	69
Annex ZD (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC	70
Bibliography	71
Figures	
Figure 1 — Relationship between various standards.....	5
Figure H.1 — Test specimen and SBI test rig.....	48
Figure J.1 — Attached bar(s).....	51
Figure J.2 — Single cross bar in the IGU with or without attached bars.....	52
Figure J.3 — Multiple cross bars in the IGU with or without attached multiple bars.....	52
Figure J.4 — Glazing bar (Georgian bar).....	52
Figure ZA.1 — Example CE marking information for roof window.....	65
Figure ZA.2 — Example CE marking information for external pedestrian doorset – Example 1.....	66
Figure ZA.3 — Example of CE marking information for external pedestrian doorset – Example 2.....	67
Tables	
Table 1 — Classification of characteristics for windows.....	19
Table 2 — Classification of characteristics for external pedestrian doorsets.....	21
Table A.1 — Interdependence between characteristics and components.....	31
Table B.1 — R_w for window based on R_w for IGU.....	35
Table B.2 — $R_w + C_{tr}$ for window based on $R_w + C_{tr}$ for IGU.....	35
Table B.3 — Extrapolation rules for different window sizes.....	36

EN 14351-1:2006+A1:2010 (E)

Table D.1 — Examples of performance and requirement profiles of a roof window	38
Table E.1 — Separate determination of characteristics for windows	40
Table E.2 — Separate determination of characteristics for external pedestrian doorsets	42
Table F.1 — Optional selection of representative test specimens for windows	44
Table G.1 — Examples of optional test sequences for combined determination of characteristics for windows	46
Table I.1 — Air permeability classification of products with described product characteristics	50
Table J.1 — Thermal transmittance for windows with bars	51
Table ZA.1 — Relevant clauses (performance characteristics)	54
Table ZA.2 — System(s) of attestation of conformity (AoC) for external pedestrian doorsets and windows (including roof windows)	56
Table ZA.3a — Assignment of evaluation of conformity tasks for products under AoC system 1	58
Table ZA.3b — Assignment of evaluation of conformity tasks for products under AoC system 3	60
Table ZA.3c — Assignment of evaluation of conformity tasks for products under AoC system 4	61

Copyright
Preview

Foreword

This document (EN 14351-1:2006+A1:2010) has been prepared by Technical Committee CEN/TC 33 “Doors, windows, shutters, building hardware and curtain walling”, the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2010, and conflicting national standards shall be withdrawn at the latest by September 2010.

This document includes Amendment 1, approved by CEN on 2010-01-31.

This document supersedes EN 14351-1:2006.

The start and finish of text introduced or altered by amendment is indicated in the text by tags \square_{A1} \square_{A1} .

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

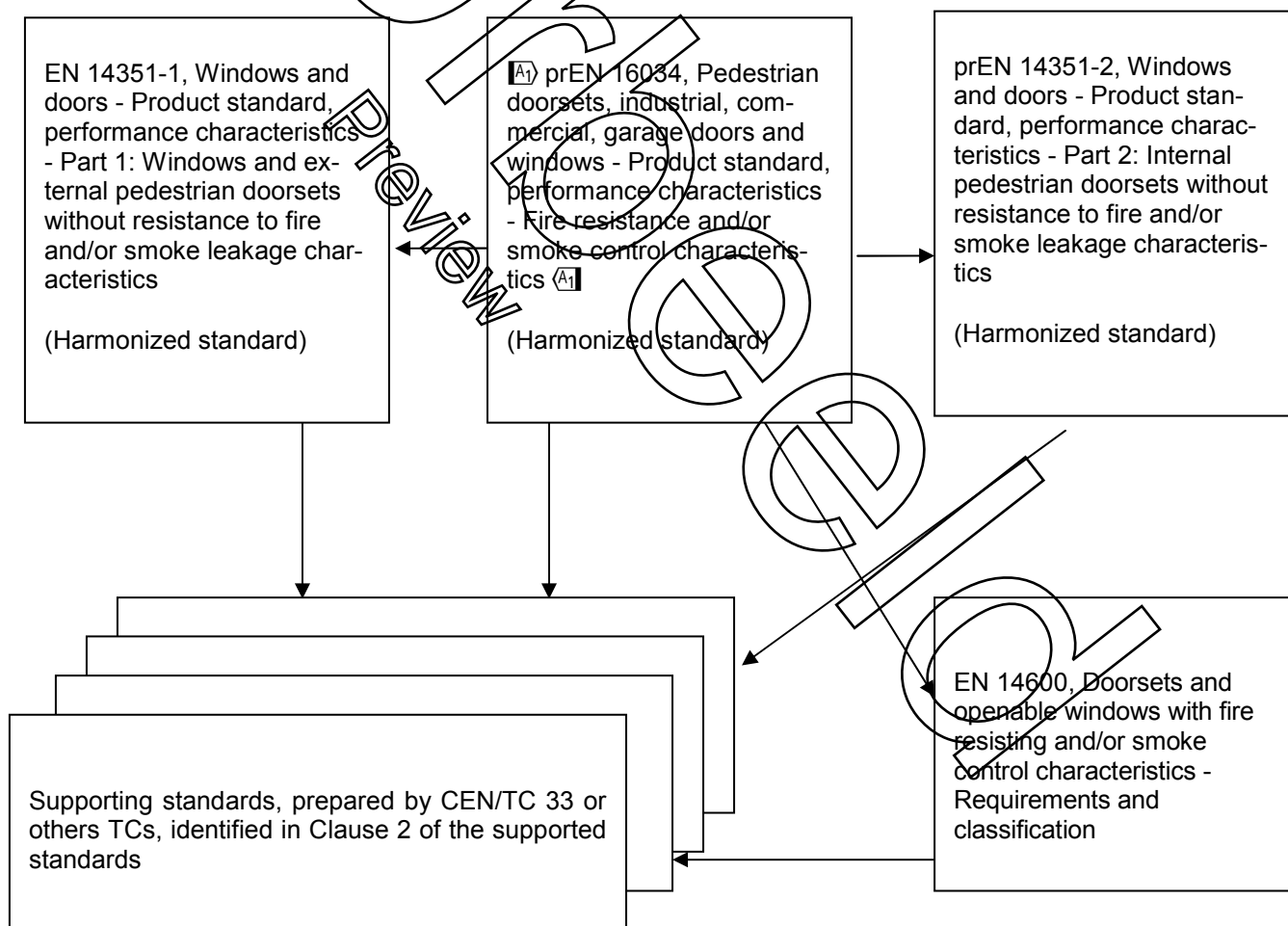



Figure 1 — Relationship between various standards

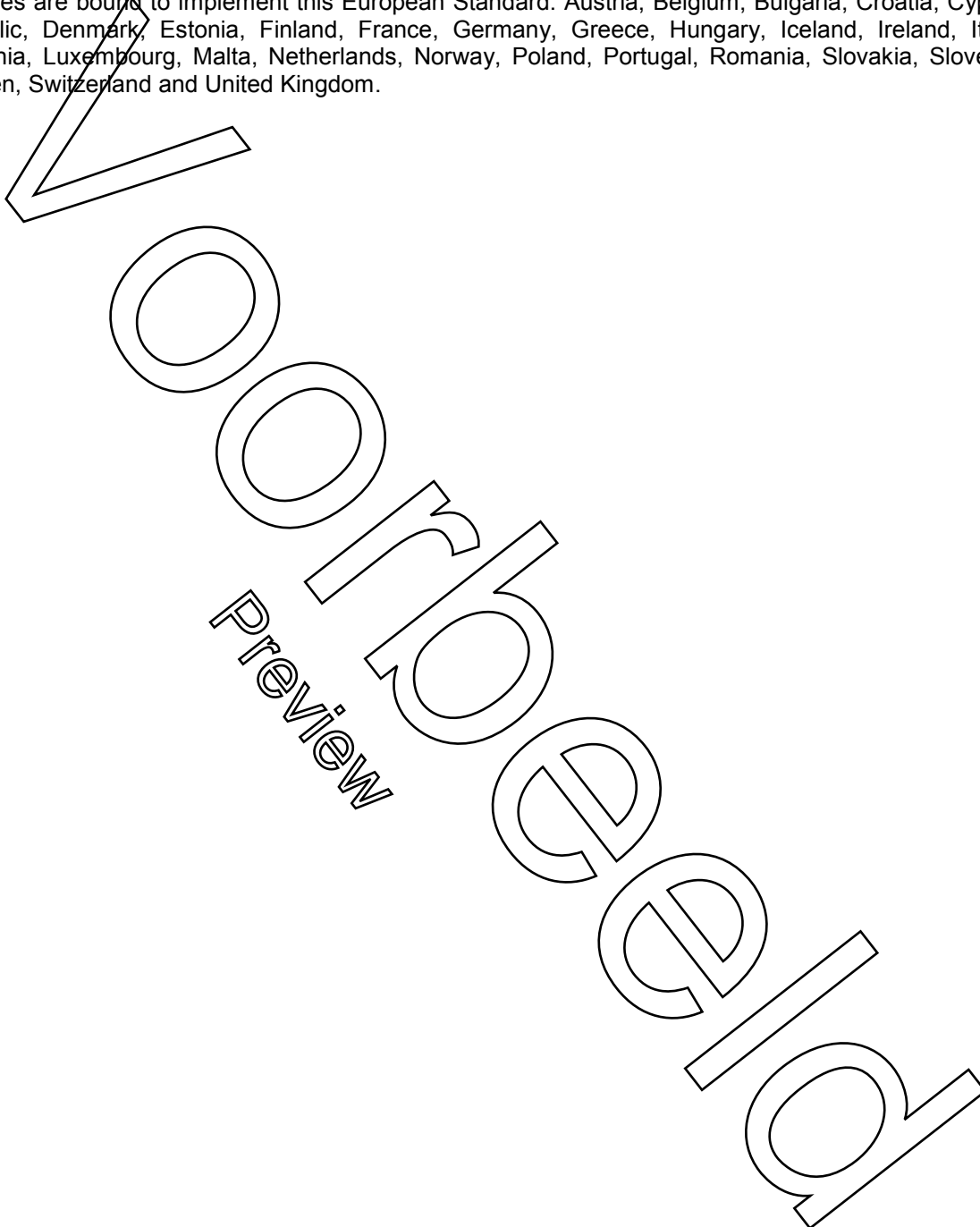
\square_{A1} This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

EN 14351-1:2006+A1:2010 (E)

For relationship with EU Directive(s), see informative Annexes ZA, ZB, ZC and ZD which are integral parts of this document. 

 NOTE Annex ZB was applicable until December 28th, 2009 and Annex ZD is applicable since December 29th, 2009. 

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



A₁ Introduction

The 1st amendment primarily adds details to previous clauses dealing with evaluation of conformity but without making any fundamental changes. The intention is to facilitate consistent interpretation particularly when addressing the possibilities of cascading ITT. The concept of shared ITT results is not excluded, but will be clarified later.

Furthermore, due to lack of updated supporting standards for powered pedestrian doors, these products have been excluded from the scope.

The opportunity has also been taken in this amendment to amend several technical issues that were under query. **A₁**

Copyright
Preview

EN 14351-1:2006+A1:2010 (E)**1 Scope**

This European Standard identifies material independent performance characteristics that are applicable to windows (including roof windows, roof windows with external fire resistance and French windows), external pedestrian doorsets (including unframed glass doorsets, escape route doorsets) and screens.

This European Standard applies to:

- 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 shutterboxes 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 operable with one or more casements/sashes (e.g. hinged, projecting, pivoted, sliding).

A1

- Manually operated external pedestrian doorsets with flush or panelled leaves, complete with: **A1**
 - integral fanlights, if any;
 - adjacent parts that are contained within a single frame for inclusion in a single aperture, if any.

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

This European Standard does not apply to:

- windows and pedestrian doorsets subject to regulations on smoke leakage and resistance to fire according to **A1** prEN 16034 **A1** but individual characteristics and performance requirements given in clause 4 can be relevant for these doors and windows (see **A1** prEN 16034 **A1**);
- rooflights according to EN 1873 and prEN 14963;
- curtain walling according to EN 13830;
- industrial, commercial and garage doors and gates according to EN 13241-1;
- internal pedestrian doorsets according to prEN 14351-2 but individual characteristics and performance requirements given in clause 4 can be relevant for internal doors (see prEN 14351-2);
- revolving doorsets;
- windows for escape routes.

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

2.1 Classification standards

EN 1192, *Doors — Classification of strength requirements*

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

ENV 1627, *Windows, doors, shutters — Burglar resistance — Requirements and classification*

EN 12207:1999, *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, *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*

2.2 Test and calculation standards

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

EN 410, *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*

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 14351-1:2006+A1:2010 (E)

EN 1125, *Building hardware — Panic exit devices operated by a horizontal bar — Requirements and test methods*

ENV 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*

ENV 1628, *Windows, doors, shutters — Burglar resistance — Test method for the determination of resistance under static loading*

ENV 1629, *Windows, doors, shutters — Burglar resistance — Test method for the determination of resistance under dynamic loading*

ENV 1630, *Windows, doors, shutters — Burglar resistance — Test method for the determination of resistance to manual burglary attempts*

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

EN 12758:2002, *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 13141-1:2004, *Ventilation for buildings — Performance testing of components/products for residential ventilation — Part 1: Externally and internally mounted air transfer devices*

A1 EN 13238, *Reaction to fire tests for building products — Conditioning procedures and general rules for selection of substrates **A1***

EN 13363-1, *Solar protection devices combined with glazing — Calculation of solar and light transmittance — Part 1: Simplified method*

EN 13363-2, *Solar protection devices combined with glazing — Calculation of total solar energy transmittance and light transmittance - Part 2: Detailed calculation method*

ENV 13420, *Windows — Behaviour between different climates — Test method*

A1 EN 13823, *Reaction to fire tests for building products — Building products excluding floorings exposed to the thermal attack by a single burning item **A1***

EN 14608, *Windows — Determination of the resistance to racking*

EN 14609, *Windows — Determination of the resistance to static torsion*

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

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

Bestelformulier

NEN

Stuur naar:

NEN Standards Products & Services
t.a.v. afdeling Klantenservice
Antwoordnummer 10214
2600 WB Delft

NEN Standards Products & Services

Postbus 5059
2600 GB Delft
Vlinderweg 6
2623 AX Delft

T (015) 2 690 390
F (015) 2 690 271

www.nen.nl/normshop

Ja, ik bestel

__ ex. NEN-EN 14351-1:2006+A1:2010 en Ramen en deuren - Productnorm, € 98.50
prestatie-eisen - Deel 1: Ramen en deuren zonder brand- en rookwerende
eigenschappen

**Wilt u deze norm in PDF-formaat? Deze bestelt u eenvoudig via
www.nen.nl/normshop**

Gratis e-mailnieuwsbrieven

Wilt u op de hoogte blijven van de laatste ontwikkelingen op het gebied van normen, normalisatie en regelgeving? Neem dan een gratis abonnement op een van onze e-mailnieuwsbrieven. www.nen.nl/nieuwsbrieven

Retourneren

Fax: (015) 2 690 271
E-mail: klantenservice@nen.nl
Post: NEN Standards Products & Services,
t.a.v. afdeling Klantenservice
Antwoordnummer 10214,
2600 WB Delft
(geen postzegel nodig).

Gegevens

Bedrijf / Instelling _____

T.a.v. _____ O M O V

E-mail _____

Klantnummer NEN _____

Uw ordernummer _____

BTW nummer _____

Postbus / Adres _____

Postcode _____

Plaats _____

Telefoon _____

Fax _____

Factuuradres (indien dit afwijkt van bovenstaand adres)

Postbus / Adres _____

Postcode _____

Plaats _____

Datum _____

Handtekening _____

Voorwaarden

- De prijzen zijn geldig tot 31 december 2016, tenzij anders aangegeven.
- Alle prijzen zijn excl. btw, verzend- en handelingskosten en onder voorbehoud bij o.m. ISO- en IEC-normen.
- Bestelt u via de normshop een pdf, dan betaalt u geen handeling en verzendkosten.
- Meer informatie: telefoon (015) 2 690 391, dagelijks van 8.30 tot 17.00 uur.
- Wijzigingen en typfouten in teksten en prijsinformatie voorbehouden.
- U kunt onze algemene voorwaarden terugvinden op: www.nen.nl/leveringsvoorwaarden.