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Shutters and external venetian blinds - Performance requirements including safety

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

Shutters and external venetian blinds - Performance requirements including safety

Fermetures et stores vénitiens extérieurs - Exigences de performance y compris la sécurité

Abschlüsse außen und Außenjalousien - Leistungs- und Sicherheitsanforderungen

This European Standard was approved by CEN on 16 February 2015.

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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-CENELEC Management Centre has the same status as the official versions.

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

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Foreword

This document (EN 13659:2015) 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of an identical text or by endorsement, at the latest by November 2015 and conflicting national standards shall be withdrawn at the latest by February 2017.

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 supersedes EN 13659:2004+A1:2008.

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 Annex ZB, which are integral parts of this document.

This European Standard is a part of a series of standards dealing with blinds and shutters for buildings as defined in EN 12216.

The major modifications to the previous edition are:

— 4.1 “Resistance to wind loads” has been modified and has been aligned with the revised version of EN 1932 “Test methods”;

— 4.2 “Resistance of non retractable elements to pressure loads” has been added to integrate requirements on the shutters and external venetian blinds in the retracted position;

— 4.8 “Resistance of mechanisms holding the shutter in the extended position” has been clarified and modified to be applicable to any type of shutters and external venetian blinds;

— 4.12 “Prevention of access” has been added;

— 4.14 “Additional thermal resistance” has been clarified;

— 4.15 “Total solar energy transmittance” has been added;

— 4.16 “Materials” has been aligned with the new version of EN 13245-1 for plastics and requirements for metals have been clarified;

— 4.17 “Dimensional tolerances” has been modified for external venetian blinds;

— Clause 7 “Assessment and verification of constancy of performance - AVCP” has been aligned with the European template;

— Annex B “Calculation of wind pressure exerted on a shutter – Allocation of a class of wind resistance” has been modified to consider values of Eurocode 1;

— Annex C “List of significant machine hazards” has been modified and EN ISO 12100 has been introduced;

— Annex D “Example of calculation for the wind resistance determination on fixed parts of shutters in retracted position” has been added;

— Annex ZA has been modified to introduce a two mandated characteristics: the total solar energy transmittance g_{tot}, the additional thermal resistance ΔR and revised in accordance with requirements of the CPR.

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, 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.

Introduction

This document is a type C standard as stated in EN ISO 12100.

The machinery concerned, i.e. power operated products, and the extent to which hazards, hazardous situations and hazardous events are covered are indicated in the scope of this document.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of the other standards, for machines that have been designed and built according to the provisions of this type C standard.

1 Scope

This European Standard specifies the performance requirements for shutters and external venetian blinds intended to be fitted externally to buildings and other construction works. It deals also with the significant hazards for assembly, transport, installation, operation and maintenance (see list of significant machine hazards in Annex C).

It applies to all shutters and external venetian blinds whatever their use and nature of the materials used, as follows and defined in EN 12216:

— external venetian blind, roller shutter, wing shutter, Venetian shutter, flat-closing concertina shutter, concertina shutter or sliding panel shutter, with or without a system of projection.

These products can be operated manually with or without compensating spring, or by means of electric motors (power operated products). However, the durability and endurance of the autonomous supply for power operated shutters and external venetian blinds not connected to the mains supply are not covered.

This European Standard deals also with all significant hazards, hazardous situations and events when shutters and external venetian blinds are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer (see Annex D).

This European Standard covers shutters and external venetian blinds mounted externally. In case such products are installed internally, they should fulfil all relevant safety requirements defined in EN 13120.

The noise emission of power operated shutters and external venetian blinds is not considered to be a relevant hazard health and safety requirements. Therefore this European Standard does not contain any specific requirements on noise health and safety objective.

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 204, *Classification of thermoplastic wood adhesives for non-structural applications*

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

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

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

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

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

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

EN 1670, *Building hardware - Corrosion resistance - Requirements and test methods*

EN 1932, *External blinds and shutters - Resistance to wind loads - Method of testing and performance criteria*

EN 12045, *Shutters and blinds power operated - Safety in use - Measurement of the transmitted force*

EN 12194, *Shutters, external and internal blinds - Misuse - Test methods*

EN 12216, *Shutters, external blinds, internal blinds - Terminology, glossary and definitions*

EN 12833, *Skylight and conservatory roller shutters - Resistance to snow load - Test method*

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 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 13125, *Shutters and blinds - Additional thermal resistance - Allocation of a class of air permeability to a product*

EN 13245-1, *Plastics - Unplasticized poly(vinyl chloride) (PVC-U) profiles for building applications - Part 1: Designation of PVC-U profiles*

EN 13330, *Shutters - Hard body impact and prevention of access - Test methods*

EN 13527, *Shutters and blinds - Measurement of operating force - Test methods*

EN 14201, *Blinds and shutters - Resistance to repeated operations (mechanical endurance) - Methods of testing*

EN 14648, *Building hardware - Fittings for shutters - Requirements and test methods*

EN 14500, *Blinds and shutters - Thermal and visual comfort - Test and calculation methods*

EN 14501, *Blinds and shutters - Thermal and visual comfort - Performance characteristics and classification*

EN 14759, *Shutters - Acoustic insulation relative to airborne sound - Expression of performance*

EN 60335-2-97, *Household and similar electrical appliances - Safety - Part 2-97: Particular requirements for drives for rolling shutters, awnings, blinds and similar equipment*

EN 61310-1, *Safety of machinery - Indication, marking and actuation - Part 1: Requirements for visual, acoustic and tactile signals*

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

EN ISO 12100, *Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100)*

ISO 9227, *Corrosion tests in artificial atmospheres - Salt spray tests*

ISO 11228-3, *Ergonomics - Manual handling - Part 3: Handling of low loads at high frequency*