

## საქართველოს სტანდარტი

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დარაბები – მუშა მახასიათებლები უსაფრთხოების გათვალისწინებით

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.

საქართველოს სტანდარტებისა და მეტროლოგიის  
ეროვნული სააგენტო  
თბილისი

სსტ ენ 13659:2015/2019

## საინფორმაციო მონაცემები

1 შემუშავებულია საქართველოს სტანდარტების და მეტროლოგიის ეროვნული სააგენტოს სტანდარტების დეპარტამენტის მიერ

2 დამტკიცებულია და შემოღებულია სამოქმედოდ საქართველოს სტანდარტების და მეტროლოგიის ეროვნული სააგენტოს 2019 წლის 20 დეკემბრის № 102 განკარგულებით

3 მიღებულია გარეკანის თარგმნის მეთოდით სტანდარტიზაციის ევროპული კომიტეტის სტანდარტი ენ 13659:2015 “დარაბები – მუშა მახასიათებლები უსაფრთხოების გათვალისწინებით”

### 4 პირველად

5 რეგისტრირებულია საქართველოს სტანდარტების და მეტროლოგიის ეროვნული სააგენტოს რეესტრში: 2019 წლის 20 დეკემბერი №268-1.3-016741

დაუშვებელია წინამდებარე სტანდარტის სრული ან ნაწილობრივი კვლავწარმოება, ტირაჟირება და გავრცელება სსიპ საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს ნებართვის გარეშე

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.

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.

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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## 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  $\Delta R$  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.

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## 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.