BSI Standards Publication

Blinds and shutters — Thermal and visual comfort — Performance characteristics and classification

National foreword

This British Standard is the UK implementation of EN 14501:2021. It supersedes BS EN 14501:2005, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/538/3, Domestic shutters and blinds.

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

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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Blinds and shutters - Thermal and visual comfort - Performance characteristics and classification

Fermetures et stores - Confort thermique et lumineux - Caractérisation des performances et classification

Abschlüsse - Thermischer und visueller Komfort - Leistungsanforderungen und Klassifizierung

This European Standard was approved by CEN on 21 October 2019.

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European foreword

This document (EN 14501:2021) 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of an identical text or by endorsement, at the latest by September 2021, and conflicting national standards shall be withdrawn at the latest by September 2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 14501:2005.

The main modifications of this project of revision are relating to:

— the revision of the performance classification for the darkening performance;

— the revision of the performance classification for the glare control. The new classification is based on DGP (Daylight Glare Probability) calculations and considers the cut-off angle of the curtain material;

— the addition of a fifth reference glazing (triple glazing);

— the addition of an informative annex giving recommendations on the class for glare control to be used depending on the location and orientation of the building, as well as on the size of the glazed area, the distance from the façade and the light transmittance of the glazing.

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Introduction

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

The characteristics covered by this document are specific requirements that are complementary to the intrinsic requirements that internal blinds, external blinds or shutters shall fulfil in accordance with EN 13120, EN 13561 and EN 13659, respectively.

1 Scope

This document applies to the whole range of shutters, awnings and blinds defined in EN 12216, described as solar protection devices in this document.

It specifies the corresponding properties and classifications:

— relating to thermal comfort:

  — the solar factor (total solar energy transmittance);

  — the secondary heat transfer factor;

  — the direct solar transmittance;

— relating to visual comfort:

  — the darkening performance;

  — the night privacy;

  — the visual contact with the outside;

  — the glare control;

  — the daylight utilization;

  — the rendering of colours.

NOTE For other purposes, more detailed methods using different parameters can be used.

Some of the characteristics (e.g. g_{tot}) are not applicable when solar protection devices are not parallel to the glazing (e.g. folding-arm awnings).

This document is not applicable to the solar protection devices using fluorescent materials.

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.

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

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

EN ISO 52022-1, *Energy performance of buildings — Thermal, solar and daylight properties of building components and elements — Part 1: Simplified calculation method of the solar and daylight characteristics for solar protection devices combined with glazing (ISO 52022-1)*[1]

EN ISO 52022-3, *Energy performance of buildings — Thermal, solar and daylight properties of building components and elements — Part 3: Detailed calculation method of the solar and daylight characteristics for solar protection devices combined with glazing (ISO 52022-3)*[2]

EN 14500:2021, *Blinds and shutters — Thermal and visual comfort — Test methods*

[1] EN ISO 52022-1 supersedes EN 13363-1.

[2] EN ISO 52022-3 supersedes EN 13363-2.