

BS 644:2009



BSI Standards Publication

Timber windows – Fully finished factory-assembled windows of various types – Specification

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Summary of pages

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Foreword

Publishing information

This British Standard is published by BSI and came into effect on 28 February 2009. It was prepared by Subcommittee B/538/1, *Windows*, under the authority of Technical Committee B/538, *Doors, windows, shutters, hardware and curtain walling*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This British Standard supersedes BS 644:2003, which is withdrawn.

Relationship with other publications

The requirements for raw materials and properties are given in BS EN 942 and BS EN 14220.

This British Standard is also related to the following other standards.

- BS EN 14351-1 is the harmonized European product standard for windows and external pedestrian doorsets without resistance to fire and smoke leakage characteristics. It gives a list of performance characteristics and classifications of performance, but does not give guidance on determining the appropriate classification for any specific application.
- BS 6375 is the national application document in the UK, giving performance requirements and guidance for the selection of appropriate classes of performance from BS EN 14351-1.
- The performance aspects in BS 6375 are referred to in BS 644.
- Guidance on the survey and installation of windows is given in BS 8213-4.

Information about this document

This is a full revision of the standard, and introduces the following principal changes:

- a change to the scope of the standard, which now applies only to factory-finished, factory-glazed timber windows;
- changes taking into account the publication of the harmonized European standard BS EN 14351 to remove any conflict between the standards¹⁾;
- information on how the requirements relate to the European Construction Products Directive [1].

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is "shall".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

¹⁾ At the time of publication of this edition of BS 644, only BS EN 14351-1 has been published. Parts 2 and 3 are in preparation.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

1 Scope

This British Standard specifies requirements for the design, construction and performance of fully finished and glazed factory-assembled timber windows of various types.

This British Standard applies to windows that have been treated with either opaque or non-opaque finishes or that are designed to support an externally fixed covering of another material, and that have been factory-glazed. It does not apply to windows supplied as kits for site assembly.

It applies to windows fabricated into frames in a factory, to be installed vertically ($\pm 15^\circ$) into the external face of buildings, as single or multi-light units, in coupled assemblies when appropriate, of the following types:

- a) hinged: side-hung (open in or out), top-hung (open out), bottom hung (open in), tilt and turn or turn before tilt;
- b) projecting: side-hung (open in or open out) and top-hung (open out);
- c) pivoted: horizontal and vertical (hung centrally or off-centre);
- d) sliding: horizontal and vertical;
- e) side-hung and top-hung (open out) fully reversible;
- f) fixed light;
- g) direct glazed frames.

It is applicable to assemblies in which any frame member is not longer than 3 m. It does not apply to curtain walls that span across horizontal structural members of floors but is applicable to windows within a curtain walling system.

It is applicable to assemblies up to the factory gate.

NOTE Guidance on the evaluation of conformity is given in Annex A. Guidance on durability and recycling is given in Annex B.

2 Normative references

The following referenced documents are indispensable for the application 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.

Standards publications

BS 1186-2, *Timber for and workmanship in joinery – Part 2: Specification for workmanship*

BS 3987, *Specification for anodic oxidation coatings on wrought aluminium for external architectural applications*

BS 4255-1, *Rubber used in preformed gaskets for weather exclusion from buildings – Part 1: Specification for non-cellular gaskets*

BS 4842, *Specification for liquid organic coatings for application to aluminium alloy extrusions, sheet and preformed sections for external architectural purposes, and for the finish on aluminium alloy extrusions, sheet and preformed sections coated with liquid organic coatings*

- BS 6100-1 (BS ISO 6707-1), *Building and civil engineering – Vocabulary – Part 1: General terms*
- BS 6100-12, *Building and civil engineering – Vocabulary – Part 12: Plant, equipment and persons*
- BS 6262-1, *Glazing for buildings – Part 1: General methodology for the selection of glazing*
- BS 6262-2, *Glazing for buildings – Part 2: Code of practice for energy, light and sound*
- BS 6262-3, *Glazing for buildings – Part 3: Code of practice for fire, security and wind loading*
- BS 6262-4, *Glazing for buildings – Part 4: Code of practice for safety related to human impact*
- BS 6262-7, *Glazing for buildings – Part 7: Code of practice for the provision of information*
- BS 6375-1, *Performance of windows and doors – Part 1: Classification for weathertightness and guidance on selection and specification*
- BS 6375-2, *Performance of windows and doors – Part 2: Classification for operation and strength characteristics and guidance on selection and specification*
- BS 6375-3, *Performance of windows and doors – Part 3: Classification for additional performance characteristics and guidance on selection and specification*
- BS 6399-2, *Loading for buildings – Part 2: Code of practice for wind loads*
- BS 6496, *Specification for powder organic coatings for application and stoving to aluminium alloy extrusions, sheet and preformed sections for external architectural purposes, and for the finish on aluminium alloy extrusions, sheet and preformed sections coated with powder organic coatings*
- BS 7412, *Specification for windows and doorsets made from unplasticized polyvinyl chloride (PVC-U) extruded hollow profiles*
- BS 8000-7, *Workmanship on building sites – Part 7: Code of practice for glazing*
- BS 8417, *Preservation of timber – Recommendations*
- PD 6484, *Commentary on corrosion at bimetallic contacts and its alleviation*
- BS EN 204:2001, *Classification of thermoplastic wood adhesives for non-structural applications*
- BS EN 330, *Wood preservatives – Field test method for determining the relative protective effectiveness of a wood preservative for use under a coating and exposed out-of-ground contact – L-joint method*
- BS EN 335-1:2006, *Durability of wood and wood-based products – Definition of use classes – Part 2: Application to solid wood*
- BS EN 350-2:1994, *Durability of wood and wood-based products – Natural durability of solid wood – Part 2: Guide to natural durability and treatability of selected wood species of importance in Europe*
- BS EN 351-1:2007, *Durability of wood and wood-based products – Preservative-treated solid wood – Part 1: Classification of preservative penetration and retention*

BS EN 599-1:1997, *Durability of wood and wood-based products – Performance of preservatives as determined by biological tests – Part 1: Specification according to hazard class* ²⁾

BS EN 755-9:2008, *Aluminium and aluminium alloys – Extruded rod/bar, tube and profiles – Part 9: Profiles, tolerances on dimensions and form*

BS EN 927-1, *Paints and varnishes – Coating materials and coating systems for exterior wood – Part 1: Classification and selection*

BS EN 927-2, *Paints and varnishes – Coating materials and coating systems for exterior wood – Part 2: Performance specification*

BS EN 942:2007, *Timber in joinery – General requirements*

BS EN 1279 (all parts), *Glass in building – Insulating glass units*

BS EN 1670:2007, *Building hardware – Corrosion resistance – Requirements and test methods*

BS EN 1982, *Copper and copper alloys – Ingots and castings*

BS EN 12020-2:2008, *Aluminium and aluminium alloys – Extruded precision profiles in alloys EN AW-6060 and EN AW-6063 – Part 2: Tolerances on dimensions and form*

BS EN 12165, *Copper and copper alloys – Wrought and unwrought forging stock*

BS EN 12206-1, *Paints and varnishes – Coating of aluminium and aluminium alloys for architectural purposes – Part 1: Coatings prepared from coating powder*

BS EN 12365-1, *Building hardware – Gasket and weatherstripping for doors, windows, shutters and curtain walling – Part 1: Performance requirements and classification*

BS EN 12373-1, *Aluminium and aluminium alloys – Anodizing – Part 1: Method for specifying decorative and protective anodic oxidation coatings on aluminium*

BS EN 12420, *Copper and copper alloys – Forgings*

BS EN 12519, *Windows and pedestrian doors – Terminology*

BS EN 12608, *Unplasticized polyvinylchloride (PVC-U) profiles for the fabrication of windows and doors – Classification, requirements and test methods*

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

BS EN 13142, *Ventilation for buildings – Components/products for residential ventilation – Required and optional performance characteristics*

BS EN 13986, *Wood-based panels for use in construction – Characteristics, evaluation of conformity and marking*

BS EN 14220, *Timber and wood-based materials in external windows, external door leaves and external doorframes – Requirements and specifications*

²⁾ A new edition of BS EN 599-1 is in preparation, and may be used instead of the 1997 edition once it has been published.