



BSI Standards Publication

Windows and doorsets – Unplasticized polyvinyl chloride (PVC-U) extruded hollow profiles – Specification

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Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 30 April 2024. It was prepared by Subcommittee B/538/1, *Windows and doors*, under the authority of Technical Committee B/538, *Doors, windows, shutters, hardware and curtain walling*. A list of organizations represented on these committees can be obtained on request to the committee manager.

Supersession

This British Standard supersedes [BS 7412:2007](#), which is withdrawn.

Information about this document

This is a full revision of the standard, and introduces the following principal change: the inclusion of non-welded corners.

This publication can be withdrawn, revised, partially superseded or superseded. Information regarding the status of this publication can be found in the Standards Catalogue on the BSI website at knowledge.bsigroup.com, or by contacting the Customer Services team.

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Presentational conventions

The provisions of this document 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.

Where words have alternative spellings, the preferred spelling of the *Shorter Oxford English Dictionary* is used (e.g. “organization” rather than “organisation”).

Use of this document

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1 Scope

This British Standard specifies requirements for the design, fabrication and performance of windows and glazed doorsets made from PVC-U extruded hollow profiles.

This British Standard applies to windows and doorsets manufactured from PVC-U hollow profiles.

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

- a) windows:
 - 1) hinged: side-hung (open in or out), top-hung (open out), bottom-hung (open in), tilt and turn or turn before tilt;
 - 2) projecting: side-hung (open in or open out) and top-hung (open out or reversible);
 - 3) pivoted: horizontal and vertical (hung centrally or off-centre) including reversible;
 - 4) sliding: horizontal and vertical;
 - i) side-hung: fully reversible;
 - ii) fixed light;
- b) doors:
 - 1) single leaf single-swing doors with or without side lights and top panels;
 - 2) double leaf single-swing doors with or without side lights and top panels.

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 point of installation.

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 documents are referred to in the text in such a way that some or all of their content constitutes provisions, or limits 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 4255-1](#), *Rubber used in preformed gaskets for weather exclusion from buildings – Part 1: Specification for non-cellular gaskets*

[BS 6100-0:2010](#), *Building and civil engineering – Vocabulary – Part 0: Introduction and index*

[BS 6100-6](#), *Building and civil engineering – Vocabulary – Part 6: Construction parts*

[BS 6100-11:2007](#), *Building and civil engineering – Vocabulary – Part 11: Performance characteristics, measurement and joints*

[BS 6100-12:2008](#), *Building and civil engineering – Vocabulary – Part 12: Plant, equipment and persons*

[BS 6262](#) (all parts), *Glazing for buildings*

- BS 6375 (all parts), *Performance of windows and doors*
- BS 7722, *Surface covered PVC-U profiles for windows and doors – Specification*
- BS 8000-7, *Workmanship on building sites – Part 7: Code of practice for glazing*
- BS EN 485-2, *Aluminium and aluminium alloys – Sheet, strip and plate – Part 2: Mechanical properties*
- BS EN 514, *Polyvinylchloride (PVC) profiles – Determination of the strength of welded corners and T-joints*
- BS EN 515, *Aluminium and aluminium alloys – Wrought products – Temper designations*
- BS EN 572 (all parts), *Glass in building – Basic soda lime silicate glass products*
- BS EN 755-9, *Aluminium and aluminium alloys – Extruded rod/bar, tube and profiles – Part 9: Profiles, tolerances on dimensions and form*
- BS EN 1027, *Windows and doors – Watertightness – Test method*
- BS EN 1096 (all parts), *Glass in building – Coated glass*
- BS EN 1279 (all parts), *Glass in building – Insulating glass units*
- BS EN 1670, *Building hardware – Corrosion resistance – Requirements and test methods*
- BS EN 1863 (both parts), *Glass in building – Heat strengthened soda lime silicate glass*
- BS EN 10088-2, *Stainless steels – Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes*
- BS EN 10346:2015, *Continuously hot-dip coated steel flat products for cold forming – Technical delivery conditions*
- BS EN 12150 (both parts), *Glass in building – Thermally toughened soda lime silicate safety glass*
- BS EN 12211, *Windows and doors – Resistance to wind load – Test method*
- BS EN 12337 (both parts), *Glass in building – Chemically strengthened soda lime silicate glass*
- BS EN 12608-1:2016+A1:2020, *Unplasticized poly(vinyl chloride) (PVC-U) profiles for the fabrication of windows and doors – Classification, requirements and test methods – Part 1: Non-coated PVC-U profiles with light coloured surfaces*
- BS EN 12608-2:2023, *Unplasticized poly(vinyl chloride) (PVC-U) profiles for the fabrication of windows and doors – Classification, requirements and test methods – Part 2: PVC-U profiles covered with foils bonded with adhesives*
- BS EN 13024 (both parts), *Glass in building – Thermally toughened borosilicate safety glass*
- 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 14178 (both parts), *Glass in building – Basic alkaline earth silicate glass products*
- BS EN 14179 (both parts), *Glass in building – Heat-soaked thermally-toughened soda lime silicate safety glass*
- BS EN 14321 (both parts), *Glass in building – Thermally toughened alkaline earth silicate safety glass*
- BS EN 14449, *Glass in building – Laminated glass and laminated safety glass – Evaluation of conformity/product standard*
- BS EN ISO 105-A01:2010, *Textiles – Tests for colour fastness – General principles of testing*

[BS EN ISO 4042](#), *Fasteners – Electroplated coatings*

[BS ISO 6707-1:2020](#), *Buildings and civil engineering works – Vocabulary – Part 1: General terms*

[BS ISO 19916-1](#), *Glass in building – Vacuum insulating glass – Basic specification of products and evaluation methods for thermal and sound insulating performance*

[PAS 24:2022](#), *Enhanced security performance requirements for doorsets and windows in the UK – Doorsets and windows intended to offer a level of security suitable for dwellings and other buildings exposed to comparable risk*

Other publications

[N1] BRITISH PLASTICS FEDERATION. *Code of practice for the reinforcement of high impact modified PVC-U windows and doors*. 323/1. London: British Plastics Federation, 1991.¹⁾

[N2] BRITISH PLASTICS FEDERATION. *Materials for gaskets and weatherstrips for windows, doors, conservatories and curtain walling – Specification and performance requirements*. 345/2. London: British Plastics Federation, 2004.

[N3] BRITISH PLASTICS FEDERATION. *Specification and guidelines for the selection and application of fasteners for the manufacture of plastics windows and doors*. 363/1. London: British Plastics Federation, 2001.

3 Terms and definitions

For the purposes of this British Standard, the terms and definitions given in [BS ISO 6707-1:2020](#), [BS 6100-6:2008](#), [BS 6100-11:2007](#) and [BS 6100-0:2010](#) and the following apply.

3.1 casement

framed opening window light that is hinged or pivoted

3.2 coupled assembly

two or more windows and/or doorsets mechanically joined to fill an opening

NOTE This was previously known as a composite assembly.

3.3 cycle

set of operations required to take a window or door from the closed and fully locked condition to the fully opened condition and back to the closed and fully locked position

3.4 door frame

part of a doorset surrounding the door leaf and to which the door leaf is hinged

3.5 door leaf

hinged, moving element within a doorset

3.6 doorset

complete unit, as installed, comprising door leaf, door frame, any associated side panels or top lights, and any operating hardware, locks and accessories

NOTE This is also known as a door assembly.

¹⁾ British Plastics Federation, 6 Bath Place, Rivington Street, London EC2A 3JE. Telephone: 020 7457 5000. Website: www.bpf.co.uk