

Surface covered PVC-U profiles for windows and doors — Specification

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Committees responsible for this British Standard

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- Aluminium Window Association
- Architectural and Specialist Door Manufacturers' Association
- Association of Builders' Hardware Manufacturers
- Association of Building Engineers
- Association of Composite Door Manufacturers
- British Plastics Federation
- British Wood Preserving and Damp-proofing Association
- British Woodworking Federation
- Building Research Establishment
- Centre for Window and Cladding Technology
- Construction Fixings Association
- Consumer Policy Committee of BSI
- Council for Aluminium in Building
- Department of the Environment
- Door and Shutter Manufacturers' Association
- Flat Glass Manufacturers' Association
- Glass and Glazing Federation
- Guild of Architectural Ironmongers
- Health and Safety Executive
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- Local Authority Organizations
- National House-building Council
- PSA Projects Ltd.
- Royal Institute of British Architects
- Security Facilities Executive
- Society of Chief Architects of Local Authorities
- Steel Window Association
- Timber Research and Development Association
- Wood Panel Industries' Federation
- Coopted members

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Foreword

This British Standard has been prepared by Subcommittee B/538/1 and Subcommittee B/538/2. It supersedes BS 7722:1994, which is withdrawn.

This edition of the standard includes updated references to standards referred to and changes to permit the use of recycled materials.

The requirements for white PVC-U extruded hollow profiles used in the construction of plastics windows conforming to BS 7412 and plastics doors conforming to PAS 23-1 are specified in BS 7413.

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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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 2 to 13 and a back cover.

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1 Scope

This British Standard specifies requirements for PVC-U extruded hollow profiles for windows and doors in which any surface to be exposed externally is covered by means of foil prior to fabrication. This British Standard applies up to the point of fabrication of the profiles into windows or doors, provided the profiles have been stored in accordance with the system's suppliers recommendations.

This British Standard does not apply to self-coloured profiles without a covering layer or profiles incorporating a non-PVC-U co-extruded weathering layer.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this British Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. For undated references, the latest edition of the publication referred to applies.

BS 2782-1:Method 130A, *Methods of testing plastics — Part 1: Thermal properties — Method 130A: Determination of the thermal stability of polyvinyl chloride by the Congored method.* (ISO 182-1)

BS 2782-3:Methods 320A to 320F, *Methods of testing plastics — Part 3: Methods 320A to 320F: Mechanical properties — Tensile strength, elongation and elastic modulus.*

BS 2782-5:Method 520A, *Methods of testing plastics — Part 5: Optical and colour properties, weathering — Method 520A: Determination of specular gloss.*

BS 3900-D8, *Methods of test for paints — Part D8: Determination of colour and colour difference: Principles.* (ISO 7724-1)

BS 3900-D9, *Methods of test for paints — Part D9: Determination of colour and colour difference: Measurement.* (ISO 7724-2)

BS 3900-D10, *Methods of test for paints — Part D10: Determination of colour and colour difference: Calculation.* (ISO 7724-3)

BS 6100-1.3.5, *Glossary of building and civil engineering terms — Part 1: General and miscellaneous — Section 1.3: Parts of construction works — Subsection 1.3.5: Doors, windows and openings.*

BS 6100-1.5.1, *Glossary of building and civil engineering terms — Part 1: General and miscellaneous — Section 1.5: Operations; associated plant and equipment — Subsection 1.5.1: Co-ordination of dimensions; tolerances and accuracy.*

BS 7412, *Plastics windows made from unplasticized polyvinyl chloride (PVC-U) extruded hollow profiles — Specification.*

BS 7413:2002, *Unplasticized polyvinyl chloride (PVC-U) profiles for windows and doors — Specification.*

BS EN 477, *Unplasticized polyvinyl chloride (PVC-U) profiles for the fabrication of windows and doors — Determination of the resistance to impact of main profiles by falling mass.*

BS EN 478, *Unplasticized polyvinyl chloride (PVC-U) profiles for the fabrication of windows and doors — Appearance after exposure at 150 °C — Test method.*

BS EN 479, *Unplasticized polyvinyl chloride (PVC-U) profiles for the fabrication of windows and doors — Determination of heat revision.*

BS EN 12956:1999, *Wallcoverings in roll form — Determination of dimensions, straightness, spongeability and washability.*

BS EN ISO 105-A01, *Textiles — Tests for colour fastness — Part A01: General principles of testing.*

BS EN ISO 178 (BS 2782-3:Method 335A), *Plastics — Determination of flexural properties.*

BS EN ISO 179:1997, *Plastics — Determination of Charpy impact strength.*

BS EN ISO 306 (BS 2782-1:Methods 120A, 120B, 120D and 120E), *Plastics — Thermoplastic materials — Determination of Vicat softening temperature (VST).*

BS EN ISO 1163-2, *Plastics — Unplasticized poly(vinyl chloride) (PVC-U) moulding and extrusion materials — Part 2: Preparation of test specimens and determination of properties.*

BS EN ISO 2409 (BS 3900-E6), *Paints and varnishes — Cross-cut test.*

BS ISO 10526:1999/CIE S005/E-1998, *CIE Standard illuminants for colorimetry.*

BRITISH PLASTICS FEDERATION. BPF WG 345/1:November 1993, *Gaskets and weatherstrips for windows, doors and curtain walling — Part 1: Requirement, classification and methods of test for gaskets co-extruded beads, weatherstrips and cellular adhesive tapes¹⁾.*

3 Terms and definitions

For the purposes of this British Standard the terms and definitions given in BS 6100-1.3.5, BS 6100-1.5.1, BS 7412 and BS 7413 and the following apply.

3.1

laminated foil

plastics layer bonded with an adhesive to cover a surface of a profile

3.2

transfer foil

coloured protective surface layer carried on a release medium and bonded to the surface of a profile by the application of heat and pressure

3.3

sight surface

surface of a profile that is exposed to view when the window or door is closed

3.4

visible surface

any surface of a profile visible after installation with any opening lights open or shut

3.5

white

colour of profiles and surface layers with exposed surfaces in the colour range $L^* \geq 82$ (chromaticity co-ordinate $Y \geq 60$), $-2.5 \leq a^* \leq 5$, and $-5 \leq b^* \leq 15$ when determined in accordance with BS 3900-D8, -D9 and -D10 (ISO 7724) and under the following conditions:

- a) BS ISO 10526:1999/CIE S005/E-1998 illuminant D65 including specular reflectance;
- b) measuring condition 8/d or d/8 (without gloss trap).

3.6

non-white

colour of profiles and surface layers for all conditions other than those described in 3.5

3.7

own reprocessable material

material of defined formulation, free from contamination and degradation, prepared from unused PVC-U profiles including offcuts, which is to be reprocessed in the same factory in which it was previously extruded

NOTE Own reprocessable material includes unused products, such as mis-measured windows, incorporating the same material as that to be processed, but excludes items such as gasket materials and surface covered profiles.

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