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Extruded cellular unplasticized white PVC (PVC-UE) profiles — Specification

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Summary of pages

This document comprises a front cover, an inside front cover, pages I to II, pages 1 to 13, an inside back cover and a back cover.

Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 December 2021. It was prepared by Technical Committee PRI/82, *Thermoplastic materials*. A list of organizations represented on this committee can be obtained on request to the committee manager.

Supersession

This British Standard supersedes [BS 7619:2010](#), incorporating Corrigendum No.1, which is withdrawn.

Information about this document

This new edition of BS 7619 incorporates technical changes only in [5.1](#) and [Table 1](#). It does not represent a full review or revision of the standard, which will be undertaken in due course.

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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.

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

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Introduction

Extruded cellular unplasticized white PVC (PVC-UE) profiles are primarily used in a variety of applications as an alternative to traditional building materials. These applications can include claddings, fascias and decorative finishing trims.

Building products made from cellular PVC-UE are characterized by a high stiffness-to-weight ratio. This is due to the formation of a denser outer skin encapsulating a rigid closed cellular core during extrusion. Profiles can be cut post-extrusion to accommodate customer requirements. The relationship between the thickness and density of the outer skin and the density of the closed cellular core can be varied to obtain products with differing performance characteristics. The expansion of the core during extrusion derives from the use of either physical or chemical expanding agents.

1 Scope

This British Standard specifies the requirements of mono and co-extruded cellular white PVC-UE profiles for non-structural building applications, where they are subjected to ambient temperatures up to 50 °C.

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 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.

[BS 476-7](#), *Fire tests on building materials and structures – Method of test to determine the classification of the surface spread of flame of products*

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

BS EN 20105-A02:1995, (ISO 105-A02:1993), *Textiles – Tests for colour fastness – Grey scale for assessing change in colour*

BS EN ISO 4892-2:2006+A1:2009, *Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc lamps*

BS EN ISO 4892-3:2006, *Plastics – Methods of exposure to laboratory light sources – Part 3: Fluorescent UV lamps*

3 Terms and definitions

For the purposes of this British Standard, the following terms and definitions apply.

3.1 extruded profile

product, created from raw plastic material that has been subjected to high temperatures and formed into a continuous profile

3.2 post-consumer waste (PCW)

3.2.1 PCWa

material, free from contamination and degradation, made from used PVC-UE profiles

3.2.2 PCWb

material, free from contamination and degradation, made from used PVC-U profiles

3.3 post-industrial waste (PIW)

3.3.1 PIWa

material, free from contamination and degradation, made from unused PVC-UE profiles including offcuts, which is reprocessed in the same factory as that in which it was previously extruded

3.3.2 PIWb

material, free from contamination and degradation, made from unused PVC-UE profiles, which is reprocessed in a different factory as that in which it was previously extruded

3.3.3 PIWc

material, free from contamination and degradation, made from unused PVC-U profiles

3.4 virgin material

material in granular or powder form without the addition of recycled material, which has only undergone processing for its own manufacture

4 Materials

4.1 General

Profiles shall be manufactured from either:

- a) 100% virgin material (100% virgin core material and 100% virgin skin material, where applicable); or
- b) recycled material conforming to [4.2](#) and [4.3](#).

4.2 Post-industrial waste (PIW)

4.2.1 General

PIW used for the production of PVC-UE profiles shall only be used for the core of a profile. Any surfaces or sections of surface which might be visible after installation shall be covered by co-extrusion with a virgin material.

4.2.2 PIWa

PIWa shall be used for the core of a profile after restabilization and/or the inclusion of additives (e.g. modifiers, pigments, lubricants), where necessary. Any surfaces or sections of surface which might be visible after installation of the products shall be covered by co-extrusion with a virgin material.

4.2.3 PIWb

PIWb shall not be used.

4.2.4 PIWc

PIWc shall not be used.