

Specification for

Decorative laminated plastics sheet veneered boards and panels

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Plastics and Rubber Standards Policy Committee (PRM/-) to Technical Committee PRM/76, upon which the following bodies were represented:

- Association of Suppliers to the Furniture Industry Ltd.
- British Laminated Plastics Fabricators' Association Ltd.
- British Plastics Federation
- Fibre Building Board Organization
- Fibre Cement Manufacturers' Association Ltd.
- Furniture Industry Research Association
- Standards Association of Australia
- Society of Motor Manufacturers and Traders Ltd.
- United Kingdom and Ireland Particleboard Association

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Foreword

This British Standard has been prepared under the direction of the Plastics and Rubber Standards Policy Committee, from an initial draft submitted by the British Laminated Plastics Fabricators Association Ltd. It is a revision of BS 4965:1983, which is superseded and withdrawn.

The most significant change in this revision is to the nomenclature used to describe the various board and panel categories. Some substrates have also been regraded.

With these changes, the suitability of the product to meet the demands of various environments, the resistance expected of the laminate surface to wear and tear, and the fire rating of the board or panel, if applicable, should now be instantly recognizable in a wide European context.

Items which may be considered for agreement between purchaser and supplier are given in Appendix A.

Examples of usage of symbols and some suggested applications of the three durability classes are provided in Appendix E.

Assessed capability. Users of this British Standard are advised to consider the desirability of assessment and registration of a supplier's quality systems against the appropriate Part of BS 5750 by a third party certification body.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This British Standard specifies requirements for decorative laminated sheet, based on thermosetting resins, bonded to a substrate, generally for interior use. It specifies the particular combinations of decorative laminate, substrate and adhesive necessary to meet the following service conditions.

- a) In normal-humidity conditions with occasional wetting.
- b) In high-humidity conditions with occasional wetting.
- c) In prolonged high-humidity conditions and frequent wetting.
- d) Where, in addition to the above, the board or panel is required to meet statutory Fire Regulations.

The type and grade of laminate required to meet the demands likely to be made on its surface are also specified.

NOTE 1 The standard is not applicable to boards and panels manufactured by directly applying uncured films to the substrate and performing cure and bond in the same process, nor boards and panels faced with other decorative films such as thermoplastics.

NOTE 2 The titles of the publications referred to in this standard are listed on the inside back cover.

2 Definitions

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

2.1

boards

composite boards produced in the standard sheet sizes of the manufacturer

2.2

panels

composite panels manufactured to specified sizes

2.3

high humidity

relative humidity above 80 %

2.4

normal humidity

relative humidity of 40 % to 80 %

2.5

low humidity

relative humidity below 40 %

3 Classification

3.1 General

The classification of boards and panels shall be indicated by the following symbols:

- a) the overall durability of the board or panel: D2, D3, D4 (see 3.2);
- b) the performance rating of the surface laminate: VG, HG, HD (see Table 1);
- c) the fire rating of the board or panel, if applicable: F1, FO (see 3.4).

3.2 Durability

Although the durability of the board or panel is determined by both the nature of the substrate and the type of adhesive used to bond the facing laminates to it, the classification used shall be that based on EN 204.

Adhesive bonds throughout the board or panel shall be classified as follows:

D2—Occasional short-term exposure to running or condensed water and/or to occasional high humidity.

D3—Frequent short-term exposure to running or condensed water and/or long-term exposure to high humidity.

D4—Frequent prolonged exposure to running or condensed water.

NOTE Only the durability classes D2, D3 and D4 of EN 204 have been cited in this standard. Class D1 is considered to be of too low a performance level for inclusion in this standard.

3.3 Surface laminate

The category of surface laminate shall be determined by its performance when tested in accordance with BS EN 438-2. These categories shall be as given in Table 1, which also provides examples of typical applications.

3.4 Fire rating

Fire-rated boards and panels shall be classified as follows.

F1—Where the composite meets the surface spread of flame requirements of class 1 in accordance with BS 476-7.

F0—Where the composite meets class 0 requirements of Appendix E of the Building Regulations 1985.¹⁾

Because of the hygroscopic nature of fire-retardant additives used in the manufacture of flame-retardant laminates, the edges of flame-retardant panels used in wet applications shall be sealed to prevent moisture ingress.

¹⁾ Available from HMSO, 49 High Holborn, London WC1V 6HB.