

Extruded rigid PVC corrugated sheeting —

Part 1: Specification for performance requirements

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- British Railways Board
- Electricity Supply Industry in England and Wales
- Greater London Council
- Institution of Civil Engineers
- National Federation of Builders' and Plumbers' Merchants
- Plastics and Rubber Institute

This British Standard, having been prepared under the direction of the Elements and Components for Buildings Standards Committee, was published under the authority of the Executive Board and comes into effect on 30 April 1980

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Foreword

This British Standard, first published in 1967, has been revised in two Parts and is now published under the direction of the Elements and Components for Building Standards Committee. It deals with the quality, performance and dimensions of rigid PVC (polyvinyl chloride) corrugated sheeting produced by extrusion and forming to the desired profile.

Requirements for seven profiles and related dimensions are specified in Part 2 of this standard.

The appendix giving recommendations for use is no longer included and reference should be made to BS 5427. Attention is drawn to the fragile nature of the material in the context of access and safety.

PVC corrugated sheeting softens at temperatures above those met with in normal service. Wherever it is used, care should be taken to ensure that the finished construction will comply with the relevant Building Regulations. Information on the fire performance of profiled sheeting may be obtained from BS 5427. Reference should also be made to BS 5427 for information on prevention of pull-through of fasteners and compatibility with sealants.

A range of colours for external cladding materials, including plastics sheeting, is given in BS 4904. It is recommended that the colour be agreed between the purchaser and the supplier and a sample specimen of the agreed colour retained for reference.

This standard does not include requirements for the appearance of the sheeting and this should be the subject of agreement between the supplier and the purchaser.

Certification. Attention is drawn to the certification facilities described on the inside back cover of this standard.

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.

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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 Part of BS 4203 specifies requirements for material and performance of unreinforced rigid PVC corrugated sheeting produced to the desired profile by extrusion and forming.

The sheeting is of the following three types of which only type A is required to comply with the requirements of clause 11.

Type A: transparent (natural)

Type B: transparent (tinted or coloured)

Type C: translucent or opaque

NOTE A certain degree of tinting may occur in some natural sheets during the manufacturing process but these sheets are still designated "natural". Where colouring has been deliberately introduced to achieve a specific effect sheets are designated "tinted" or "coloured".

2 References

The titles of the publications referred to in this standard are listed on page 10.

3 Material

3.1 The material from which the sheet is produced shall consist substantially of polyvinyl chloride.

Only those additives that are needed for the manufacture of the polymer and for its subsequent conversion into sound durable sheet of good surface finish and mechanical strength and such pigments, dyes or tints as are necessary to meet the requirements of clause 4 may be added.

3.2 The use of the manufacturer's own clean rework material complying with the requirements of this standard is permitted; no other rework material shall be used.

4 Colour fastness

When the sheeting is tested by the method given in Appendix A, there shall be no noticeable deterioration in its appearance or colour.

5 Heat stability

When the sheet is tested by the method described in Appendix B, the time taken for the sample to become completely black shall be not less than 90 min.

6 Thickness

The thickness of the sheet shall be quoted by the manufacturer. This shall be not less than 1.30 mm for profile depths of 55 mm and under, and not less than 1.40 mm for profile depths above 55 mm.

The measured thickness at any point on the sheet shall be not less than 96 % of the thickness quoted by the manufacturer.

7 Dimensions

The length of the sheet when measured at a temperature of 23 ± 2 °C shall be not less than the nominal length quoted by the manufacturer. The ends shall be cut square.

The edges of the sheet shall be parallel to the longitudinal corrugations.

8 Retention of profile

When the sheet is tested by the method given in Appendix C, the change in the pitch of the corrugations of the test piece shall not exceed 2 %.

9 Resistance to falling weight

When the sheet is tested by the method given in Appendix D, the test piece shall not break or sustain any crack or tear extending from one surface to the other. This test shall not be carried out earlier than 24 h after manufacture.

10 Resistance to loading

10.1 When sheet of profile numbers 1 to 7, as specified in Part 2 of this standard, is tested by the method given in Appendix E, the maximum deflection of the test piece shall not exceed the values given in Table 1.

10.2 When sheet of any profile is tested by the method given in Appendix E, the residual deflection shall be not more than 10 % of the maximum value after the load has been removed for 6 h and there shall be no residual deformation of the profile.

Table 1 — Maximum deflection

Profile number of sheeting	Maximum deflection
	mm
1	50
2, 3, 4, 5, 6 and 7	15

11 Light transmission

When tested by the method given in Appendix F or by the method given in Appendix G, type A transparent (natural) sheet shall have a light transmission of not less than 80 % for sheet of profile depth 55 mm and under, and of not less than 72 % for sheet of profile depth above 55 mm.