

Polyvinyl chloride boots —

Part 1: Specification for general and industrial lined or unlined boots

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Rubber Standards Committee (RUM/-) to Technical Committee RUM/7 upon which the following bodies were represented:

- Association of County Councils
- Association of Metropolitan Authorities
- British Coal
- British Fire Services' Association
- British Footwear Manufacturers' Federation
- British Rubber Manufacturers' Association
- Chief and Assistant Chief Fire Officers' Association
- Department of Health and Social Security
- Engineering Equipment and Materials Users' Association
- Home Office
- Institution of Fire Engineers
- Malaysian Rubber Producers' Research Association
- Ministry of Defence
- Rapra Technology Limited
- Rubber Growers' Association

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Foreword

This Part of BS 6159 has been prepared under the direction of the Rubber Standards Committee and is a revision of BS 6159-1:1981 which is withdrawn. The prime purpose of this revision is to bring products made by single and double injection moulding processes within the scope of this Part of BS 6159. The main differences between this revision and the previous edition are as follows.

- a) Requirements for the breaking force of the coated fabric upper material have been deleted, because wear performance is more accurately predicted by the boot upper flexing test.
- b) Tensile properties are measured at 23 ± 2 °C. The maximum value for modulus at 100 % elongation has been increased to 4.6 MPa for the upper and to 5.0 MPa for the soling to allow both for single and double injection processes; the minimum values for modulus at 100 % elongation are unchanged.
- c) The minimum value for elongation at break of upper material has been reduced to 250 % to take into account the effect of increased polymer orientation in a moulded upper compared to that in a sole.
- d) The hardness range of the polyvinyl chloride (PVC) compound has been changed for both the upper and soling compounds to allow for both single and double injection processes.
- e) Reference to the dimensions of three-quarter and full thigh boots has been included.
- f) A minimum radius of corners at the base of the sole pattern has been specified.
- g) The maximum cold flex temperature has been reduced from -25 °C to -35 °C.
- h) The volatility limit has been raised from 1.6 % to 2.0 %.

This Part of BS 6159 is related to ISO 4643:1980, published by the International Organization for Standardization. Differences between this Part and ISO 4643 include those differences listed as a) to g) between this and the previous edition of BS 6159-1, together with the following.

- 1) There is a minimum requirement for the intercleat thickness.
- 2) The methods of measuring the thickness of the boot parts are specified in more detail.
- 3) The requirements for the preparation of test pieces are more clearly specified.
- 4) The hardness test is required to be carried out not less than 7 days after manufacture, but the upper limit of 90 days has been deleted.
- 5) The thickness of the foxing strip at the back of the heel is 4.0 mm compared with 3.5 mm in ISO 4643.
- 6) For determination of resistance of soling to cut growth, this Part of BS 6159 refers to BS 5131-2.1 and BS 5131-2.7 whereas ISO 4643:1980 refers to its Annex B. These references are technically equivalent.

Suggested ranges for boot heights are given in Appendix A in place of the minimum heights specified in BS 6159-1:1981.

Methods of test are described in Appendix B, Appendix C, Appendix D and Appendix E.

It is envisaged that subsequent Parts of this British Standard will specify requirements for PVC boots with chemical resistance and PVC boots with resistance to oils and fats.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 8, 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.