BRITISH STANDARD 1336 : 1971

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METRIC UNITS

SPECIFICATION FOR

KNOTTING

BRITISH STANDARDS INSTITUTION

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KNOTTING

BS 1336 : 1971

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BRITISH STANDARDS INSTITUTION

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THIS BRITISH STANDARD, having been approved by the Pigments, Paints and Varnishes Industry Standards Committee, was published under the authority of the Executive Board on 5 February, 1971.

First published, December, 1946.
First revision, February, 1971.
SBN : 580 06445 X

The Institution desires to call attention to the fact that this British Standard does not purport to include all the necessary provisions of a contract.

In order to keep abreast of progress in the industries concerned, British Standards are subject to periodic review. Suggestions for improvements will be recorded and in due course brought to the notice of the committees charged with the revision of the standards to which they refer.

A complete list of British Standards, numbering over 5000, fully indexed and with a note of the contents of each, will be found in the British Standards Yearbook, price £1.50. The BS Yearbook may be consulted in many public libraries and similar institutions.

This standard makes reference to the following British Standards:

BS 245. White spirit
BS 2526. White finishing paints for protective purposes.
BS 3235. Test methods for bitumen.
BS 3591. Industrial methylated spirits.
BS 3722. Machine-made shellac.
BS 3900. Methods of test for paints.
Part A1. Sampling.
Part A3. Standard panels for paint testing.
Part B2. Determination of volatile matter and non-volatile matter.
Part C2. Surface-drying test (ballotini method).
Part G1. Resistance to organic liquids

British Standards are revised, when necessary, by the issue either of amendment slips or of revised editions. It is important that users of British Standards should ascertain that they are in possession of the latest amendments or editions.

The following BSI references relate to the work on this standard:
Committee reference PVC/— Draft for comment 69/25274

CO-OPERATING ORGANIZATIONS

The Pigments, Paints and Varnishes Industry Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government departments and scientific and industrial organizations:

Board of Trade
British Colour Makers' Association
British Railways Board
Chemical Industries Association
Crown Agents for Oversea Governments and Administrations
Greater London Council
Lead Oxide Convention
London Transport Executive
Ministry of Defence, Army Department
Ministry of Defence, Navy Department
Ministry of Public Building & Works
Ministry of Public Building & Works, Building Research Station
Ministry of Technology (Aviation)
Ministry of Technology, Laboratory of the Government Chemist
Oil and Colour Chemists' Association
Paint Manufacturers and Allied Trades Association
*Paintmakers' Association of Great Britain Ltd.
Post Office
*Research Association of British Paint, Colour and Varnish Manufacturers
Royal Institute of British Architects
Royal Institute of Public Health & Hygiene
Titanium Pigment Manufacturers' Technical Committee
White Lead Manufacturers' Association
Zinc Development Association
Zinc Pigment Development Association

The scientific and industrial organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

The London Shellac Trade Association

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BRITISH STANDARD SPECIFICATION FOR

KNOTTING

FOREWORD

This British Standard was first published in 1946 under the authority of the Chemical Divisional Council. The present revision has been brought up to date in respect of its technical content and layout.

SPECIFICATION

1. SCOPE

This British Standard specifies requirements for knotting used in the preparation of joinery for painting as an impervious covering for knots and other resinous areas liable to stain superimposed paints.

2. DESCRIPTION AND COMPOSITION

The knotting shall be a uniform dispersion of lac or a suitable* resin (natural or synthetic) in a suitable solvent. It shall produce a film which is unaffected by the natural solvents present in resinous knots or by the solvents commonly used in paint and shall comply with the requirements specified in Clauses 4 to 9 of this standard. It shall be of such a consistency that it will work freely under the brush.

3. SAMPLE

For the purposes of the tests described below, representative samples of not less than 500 ml of the material shall be taken and packed in accordance with BS 3900, Part A1†.

4. SOLID CONTENT

The non-volatile matter of the material shall not be less than 30 % by mass when determined in the manner described in BS 3900, Part B2‡ using 5 g of material.

* The term 'suitable' is intended to convey that the material selected shall be capable of performing all the functions of a knotting in a similar manner to the standard lac solution described in Clause 10.
† BS 3900, 'Methods of test for paints', Part A1, 'Sampling'.
‡ BS 3900, 'Methods of test for paints', Part B2, 'Determination of volatile matter and non-volatile matter'.

5. APPEARANCE OF SOLUTION

Apart from the normal turbidity of lac solutions, the material shall be free from visible aggregates and foreign matter.

6. DRYING TIME OF MATERIAL AND APPEARANCE OF DRIED FILM

The material when applied at a spreading rate of not more than 17 g/m^2 to a solvent-cleaned glass panel conforming to BS 3900, Part A3* and tested by the method described in BS 3900, Part C2†, shall be surface-dry in 1 h.

The dried film shall be bright in appearance.

7. BLEEDING

The material when tested in the manner described in Appendix A shall not bleed more than the standard lac solution.

8. STAIN PREVENTION

The material when tested in the manner described in Appendix B shall prevent discoloration of the white paint film to at least the same extent as the standard lac solution.

9. RESISTANCE TO WHITE SPIRIT

The material when tested in the manner described in Appendix C shall not show a greater degree of softening than the standard lac solution.

10. STANDARD LAC SOLUTION

The standard lac solution referred to in Clauses 7, 8 and 9 of this standard shall be made by mixing 2 kg of lac complying with BS 3722‡, Type III in 5 litres of 64 OP industrial methylated spirit§. The lac shall be dispersed to form a uniform varnish free from aggregates.

* BS 3900, 'Methods of test for paints', Part A3, 'Standard panels for paint testing'.
† BS 3900, 'Methods of test for paints', Part C2, 'Surface-drying test (ballotini method)'.
‡ BS 3722, 'Machine-made shellac'.
§ BS 3591, 'Industrial methylated spirits'. It should be noted that the use of industrial methylated spirits is governed by the Methylated Spirits Regulations, 1952 (SI 1952, No. 2230).

APPENDIX A

METHOD FOR COMPARISON OF BLEEDING

A.1 Procedure. Apply the knotting by brush to a 150 mm × 100 mm solvent-cleaned glass panel conforming to BS 3900, Part A3* at a spreading rate of not more than 17 g/m² and allow it to dry at a temperature of 20 ± 2 °C and a relative humidity of 65 ± 5 % in a vertical position.

Prepare a test panel in the same manner and at the same time using the standard lac solution. Apply to each coated panel at the same spreading rate a coat of white paint complying with BS 2526†.

Allow the paint to dry for 16 h at a temperature of 20 ± 2 °C and a relative humidity of 65 ± 5 % and then stove the panels for 2 h at a temperature of 45 ± 5 °C. Allow the panels to stand for 7 days and compare the two panels for bleeding.

APPENDIX B

METHOD FOR COMPARISON OF STAIN PREVENTION

B.1 Material. Blown bitumen, having a ring and ball softening point‡ of 110 °C to 121 °C and a penetration‡ of 10 to 20 when determined in accordance with BS 3235‡.

B.2 Procedure. Cast films of the bitumen in two moulds and allow to cool.

Apply the knotting by brush to one bitumen film at a spreading rate of 17 g/m² and the standard lac solution similarly to the other bitumen film. Allow the knotting to dry for 30 min at a temperature of 20 ± 2 °C and a relative humidity of 65 ± 5 %.

Age the coated bitumen films for 24 h at a temperature of 20 ± 2 °C and a relative humidity of 65 ± 5 % and then for 24 h at a temperature of 35 ± 2 °C.

Apply a coat of white paint complying with BS 2526† to each coated bitumen film and allow it to dry at a temperature of 20 ± 2 °C and a relative humdity of 65 ± 5 %.

Compare the two white paint films for staining.

* BS 3900, 'Methods of test for paints', Part A3, 'Standard panels for paint testing'.
† BS 2526, 'White finishing paints for protective purposes'.
‡ BS 3235, 'Test methods for bitumen'.

APPENDIX C

METHOD OF COMPARISON OF RESISTANCE TO WHITE SPIRIT

C.1 Procedure. Apply the knotting by brush to a 150 mm × 100 mm solvent-cleaned glass panel conforming to BS 3900, Part A3* at a spreading rate of not more than 17 g/m² and allow it to dry at a temperature of 20 ± 2 °C and a relative humidity of 65 ± 5 % in a vertical position. Prepare a test panel in the same manner and at the same time using the standard lac solution.

Carry out the test described in BS 3900, Part G1†, using white spirit‡ as the immersion liquid, an immersion period of 24 h, and a test temperature of 20 ± 2 °C.

Compare the films for softening or other defects.

* BS 3900, 'Methods of test for paints', Part A3, 'Standard panels for paint testing'.
† BS 3900, 'Methods of test for paints', Part G1, 'Resistance to organic liquids'.
‡ BS 245, 'White spirit'.

BRITISH STANDARDS INSTITUTION

The British Standards Institution was founded in 1901 and incorporated by Royal Charter in 1929.

The principal objects of the Institution as set out in the charter are to co-ordinate the efforts of producers and users for the improvement, standardization and simplification of engineering and industrial materials; to simplify production and distribution; to eliminate the waste of time and material involved in the production of an unnecessary variety of patterns and sizes of articles for one and the same purpose; to set up standards of quality and dimensions, and to promote the general adoption of British Standards.

In carrying out its work the Institution endeavours to ensure adequate representation of all viewpoints. Before embarking on any project it must be satisfied that there is a strong body of opinion in favour of proceeding and that there is a recognized need to be met.

The Institution is a non-profit-making concern. It is financed by subscriptions from firms, trade associations, professional institutions and other bodies interested in its work, by a Government grant and by the sale of its publications. The demands on the services of the Institution are steadily increasing and can only be met if continuing and increased financial support is provided.

Membership of the Institution is open to British subjects, companies, technical and trade associations, and local and public authorities.

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