

BRITISH STANDARD SPECIFICATION

UNTREATED
ASBESTOS PAPER

For Electrical Purposes

B.S. 3057 : 1958

THIS BRITISH STANDARD, having been approved by the Electrical Industry Standards Committee and endorsed by the Chairman of the Engineering Divisional Council, was published under the authority of the General Council on 31st December, 1958.

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 periodical 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 3000, indexed and cross-indexed for reference, together with an abstract of each standard, will be found in the Institution's Yearbook,

This standard makes reference to the following British Standards:

- B.S. 358 Rules for the measurement of voltage with sphere-gaps.
- B.S. 1780 Pressure gauges.
- B.S. 2844 Memorandum on standard conditions for use during the testing and pre-conditioning of electrical insulating materials.

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 B.S.I. references relate to the work on this standard:—
Committee references ELE/16, ELE/16/12
Draft for comment CX(ELE) 1701

Amendment No. 1, published 4 January 1963

to B.S. 3057 : 1958

Untreated asbestos paper

Revision

Appendix E. Method of carrying out test for conducting paths. Delete the third paragraph and replace by the following :

'The plate and roller shall be connected in series with a pair of telephone receivers of total resistance 2000 to 4000 ohms and a resistor of 100 000 to 200 000 ohms resistance, across a d.c. supply of 100 volts which, for example, could conveniently be a dry battery.'

Amendment Slip No.2, published 30 September 1977
to B.S. 3057 : 1958

Untreated asbestos paper for electrical purposes

Revised text

Page 2. Delete the existing list of reference standards and substitute the following:

- ‘B.S. 358 Method for the measurement of voltage with sphere-gaps (one sphere earthed).
- B.S. 1780 Bourdon tube pressure and vacuum gauges.
- B.S. 2844 Memorandum on conditioning of solid electrical insulating materials prior to and during testing.’

Foreword. Insert the following new paragraph between the existing paragraph and the note:

‘**WARNING.** The use of asbestos products is controlled by the Asbestos Regulations 1969. The Regulations require that any dust liberated during the handling and working of these products should be maintained at a low level. Adequate methods exist to control levels of dust during such operations and these are detailed in the Control and Safety Guides issued by the Asbestosis Research Council.’

Page 9. Footnote. Delete the existing title of B.S. 2844 and substitute the following.

‘Memorandum on conditioning of solid electrical insulating materials prior to and during testing.’

Page 12. Footnotes. In the second footnote delete the existing title of B.S. 358 and substitute the following:

‘Method for the measurement of voltage with sphere-gaps (one sphere earthed).’

Page 19. Footnote. Delete the existing title of B.S. 1780 and substitute the following:

‘Bourdon tube pressure and vacuum gauges.’

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CO-OPERATING ORGANIZATIONS

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

- *Admiralty
- Air Ministry
- Associated Offices' Technical Committee
- Association of Consulting Engineers (Incorporated)
- Association of Supervising Electrical Engineers
- *British Electrical and Allied Industries Research Association
- *British Electrical and Allied Manufacturers' Association
- British Electrical Development Association
- British Railways, The British Transport Commission
- Cable Makers' Association
- Crown Agents for Oversea Governments and Administrations
- Electric Lamp Industry Council
- Electric Light Fittings Association
- Electrical Contractors' Association (Incorporated)
- Electrical Contractors' Association of Scotland
- Electricity Council, the Generating Board and the Area Boards in England and Wales.
- Engineering Equipment Users' Association
- Independent Cable Makers' Association
- Institution of Electrical Engineers
- Ministry of Labour and National Service (Factory Inspectorate)
- Ministry of Power
- *Ministry of Supply
- Ministry of Works
- National Inspection Council for Electrical Installation Contracting
- *National Physical Laboratory (D.S.I.R.)
- Oil Companies Materials Committee
- *Post Office
- Public Transport Association (Incorporated)
- *Radio Industry Council
- South of Scotland Electricity Board
- War Office

The Government departments and 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 the standard :

- Accumulator Makers' Association
- British Paper and Board Industry Research Association
- British Paper and Board Makers' Association (Incorp.)
- British Plastics Federation
- Glass Textile Association Ltd.
- Radio and Electronic Component Manufacturers' Federation
- Research Association of British Rubber Manufacturers
- Manufacturers of untreated asbestos tape

BRITISH STANDARD SPECIFICATION FOR UNTREATED ASBESTOS PAPER FOR ELECTRICAL PURPOSES

FOREWORD

This British Standard has been prepared under the authority of the Electrical Industry Standards Committee on the basis of a report received from the British Electrical and Allied Industries Research Association. The methods of test are based, where applicable, on the Recommended Methods of the British Paper and Board Makers' Association.

NOTE. Where metric equivalents have been given the figures in British units are to be regarded as the standard. The metric conversions are approximate. More accurate conversions should be based on the tables in B.S. 350, 'Conversion factors and tables'.

SPECIFICATION

SCOPE

1. This British Standard covers untreated asbestos paper suitable for use as electrical insulation in thicknesses from 5 to 10 mils* (0.13 mm to 0.25 mm).

NOTE. It is recognized that paper thicker than 10 mils (0.25 mm) is used in cases where specific electrical and mechanical properties are not required and therefore recommended thicknesses up to 25 mils (0.64 mm) have been given for these papers.

CLASSIFICATION

2. For the purpose of this British Standard untreated asbestos paper is considered to be paper in which the predominant raw material is asbestos fibre. The paper is classified as follows:

Type 1. Paper containing the minimum amount of organic binder and used for general electrical insulation purposes.

Type 2. An improved paper, made from selected asbestos fibres and having a greater amount of organic binder than Type 1, giving increased mechanical strength and a minimum number of conducting paths.

THICKNESS

3. *a.* The nominal thicknesses shall be as given in Table 1.

* 1 mil = 0.001 in. = 0.0254 mm.

TABLE 1

Type 1		Type 2	
mils	mm	mils	mm
—	—	5	0·13
7	0·18	7	0·18
10	0·25	10	0·25
12	0·30	12	0·30
15	0·38	15	0·38
20	0·51	20	0·51
25	0·64	25	0·64

b. The mean thickness of the paper, when determined as described in Appendix B, shall not differ from the nominal thickness by more than the appropriate tolerance given in Table 2.

TABLE 2

Nominal thickness				Tolerance plus or minus Types 1 and 2	
mils		mm		mils	mm
<i>Above</i>	<i>Up to</i>	<i>Above</i>	<i>Up to</i>		
	5		0·13	1	0·025
5	12	0·13	0·30	1	0·025
12	20	0·30	0·51	2	0·050
20	25	0·51	0·64	3	0·076

SURFACE

4. The surface of the paper shall be free from abnormal blemishes which are likely to be detrimental to its use.

SUBSTANCE

5. The substance of the paper is a matter for agreement between the supplier and the purchaser.

a. Substance in relation to nominal thickness. The substance of the paper, when measured in accordance with Section A of Appendix C, shall not differ from the agreed value by more than 7½ per cent.