

NZS 2295:1988

(BS 4016:1972, IDT)



New Zealand Standard

Specification for building papers (breather type)

NZS 2295:1988

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NZS 2295: 1988

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BRITISH STANDARD 4016 : 1972

UDC 691.144 : 676.266.7

WITHDRAWN

SPECIFICATION FOR BUILDING PAPERS (BREATHER TYPE)

This British Standard has been declared by the Standards Council to be a New Zealand Standard Specification pursuant to the provisions of the Standards Act 1965.

The expression "this British Standard" when used herein shall mean and refer to "this New Zealand Standard Specification" and any reference to any British Standard cited herein which has been declared to be a New Zealand Standard Specification shall mean and refer to such Standard Specification.

The number given to this New Zealand Standard Specification is

NZS 2295: 1988

WITHDRAWN

New BS edition 11/97

This edition still current in NZ

BRITISH STANDARDS INSTITUTION

Gr 2

WITHDRAWN

SPECIFICATION FOR BUILDING PAPERS (BREATHER TYPE)

BS 4016 : 1972

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BS 4016 : 1972

THIS BRITISH STANDARD, having been approved by the Bituminous Products Industry Standards Committee, was published under the authority of the Executive Board on 28 July, 1972.

First Published, April, 1966.

Metric edition, July, 1972.

ISBN: 0 580 07165 0

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 5000, fully indexed and with a note of the contents of each, will be found in the British Standards Yearbook, which may be purchased from BSI Sales Department. It may also be consulted in many public libraries and similar institutions.

This standard makes reference to the following British Standards:

- BS 2924. Methods for determining the pH value, conductivity and chloride and sulphate contents of aqueous extracts of paper and board.
- BS 3137.* Method for determining the bursting strength of paper and board.
- BS 3177. Method for determining the permeability to water vapour of flexible sheet materials used for packaging.

* In course of preparation

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 references BMB/4 and BMB/4/1
Draft for approval 71/13195

Printed in England by Westow Press Ltd., Childs Lane, London S.E.19 (2-5k)

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CO-OPERATING ORGANIZATIONS

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

- *Association of British Roofing Felt Manufacturers
- *Association of Waterproof Paper Manufacturers
- British Tar Industry Association
- *Department of the Environment
- Department of the Environment—Building Research Station
- Federation of Civil Engineering Contractors
- *Felt Roofing Contractors Advisory Board
- *Institute of Petroleum
- Institution of Civil Engineers
- Institution of Structural Engineers
- Mastic Asphalt Council and Employers Federation
- National Association of Master Asphalters
- *National Federation of Builders' and Plumbers' Merchants
- National Federation of Building Trades Employers
- Pitch Fibre Pipe Association of Great Britain
- Refined Bitumen Association Ltd.
- Royal Institute of British Architects
- Royal Institution of Chartered Surveyors
- Society of Chemical Industry
- Standardization of Tar Products Tests Committee

The Government department 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 this British Standard:

- British Paper and Board Makers' Association (Incorporated)
- Cement and Concrete Association
- Institute of Purchasing and Supply
- Institution of Municipal Engineers
- National Council of Building Material Producers
- National Federation of Roofing Contractors
- Technical Section of the British Paper and Board Makers' Association
- Timber Research and Development Association

BRITISH STANDARD SPECIFICATION FOR BUILDING PAPERS (BREATHER TYPE)

FOREWORD

This metric edition of BS 4016 has been prepared as part of the change to the metric system in the construction industry.

Values are expressed in SI units. For further information on SI units reference should be made to BS 3763, 'The International System of units (SI)'.

The recommendations for the co-ordinating of dimensions in building as laid down in BS 4011, 'Recommendations for the co-ordination of dimensions in building. Basic sizes for building components and assemblies', BS 4330, 'Recommendations for the co-ordination of dimensions in building. Controlling dimensions', PD 6444, Part 1, 'Recommendations for the co-ordination of dimensions in building. Basic spaces for structure, external envelope and internal sub-division' and PD 6445, 'Recommendations for the co-ordination of dimensions in building. Tolerance and joints. The derivation of building component manufacturing sizes from co-ordinating sizes', are embodied in 2 of this standard where a 1000 mm width of roll is suitable for use on buildings constructed with modular components.

The technical content of this metric version remains the same as the 1966 edition which is now withdrawn, and the Foreword as it appeared in that edition is reproduced below:

This British Standard has been prepared at the suggestion of the Standards Association of Australia, the British Columbia Lumber Manufacturers' Association, the New Zealand Standards Institute, the Timber Research and Development Association and BSI's Building and Engineering Services Committee in Scotland, and has been authorized by the Bituminous Products Industry Standards Committee.

The objects of 'breather papers' is to provide, within cavities in buildings, a moisture-proof and draught-proof lining which does not impede the passage of water vapour and which therefore minimizes the condensation of such vapour within the cavities. The British Standards Institution has been asked not only to issue this present specification but also as a matter of urgency to consider the preparation of a Code of Practice on the prevention of condensation in cavities within timber structures.

Owing to the wide range of materials which could be used as a base for breather papers it is considered undesirable to specify the constituent materials and the object of the present standard is to lay down basic requirements to which the finished products shall conform. It has not been found feasible to

specify requirements in respect of durability or tear resistance and the standard has been based on the general requirements of BS 1521, 'Waterproof building papers'. As to durability, experience indicates that breather papers are no less durable than other types of building papers.

SPECIFICATION

1. SCOPE

This British Standard specifies quality, dimensions and performance requirements for breather type building papers.

NOTE. The titles of the British Standards referred to in this standard are listed on page 2.

2. GENERAL

2.1 Standard rolls. The paper shall be supplied in standard rolls of 50 m length and in multiples of 50 m and in widths of 1000 mm and 1500 mm. If specially ordered, other widths may be cut from these sizes to meet special requirements. If specially ordered, half rolls of 25 m length may also be supplied.

2.2 Freedom from defects. The material shall be free from visible defects and, under the normal climatic conditions encountered in the British Isles, provided that the rolls are properly stacked on end and not laid flat, shall not become sticky in the roll.

3. TEST REQUIREMENTS

3.1 General. Breather type building papers shall comply with the requirements in 3.2, 3.3, 3.4, and 3.5.

3.2 Permeability. When determined on uncreased samples by the method specified in BS 3177, the water vapour permeability of breather type building paper shall be not less than 36 grams per square metre per 24 hours (36 g/m² per d) at 25°C and a relative humidity of 75 %.

3.3 Resistance to water penetration. When determined by the method specified in the Appendix, the resistance to water penetration of breather type building paper shall be such that the filter paper shall be free from stain after 24 h.

3.4 Bursting strength. When determined by the method specified in BS 3137, the bursting strength of breather type building paper shall be not less than 380 kN/m².

3.5 Reaction. When determined by the method specified in BS 2924, the pH of the water extract of breather type building paper shall be not less than 4.5 and not greater than 7.5.

4. SELECTION OF ROLLS FOR SAMPLING

4.1 In the case of dispute, the manufacturer shall be given a reasonable opportunity to have a representative present at the time of sampling.

4.2 To obtain an average sample of each consignment, the following number of rolls shall be selected at random for examination:

- up to 100 rolls, select 5 rolls
- over 100 and up to 200 rolls, select 6 rolls
- over 200 and up to 500 rolls, select 7 rolls
- over 500 and up to 1000 rolls, select 8 rolls
- over 1000 rolls, select 9 rolls.

5. SELECTION OF TEST SPECIMENS FROM ROLL SAMPLES

To obtain test specimens the selected roll shall be unrolled approximately 3 m from the outside edge and cut at right angles to the edge of the roll to obtain two strips 1 m in length by the width of the roll. One of these strips shall be used for analysis, the other being retained for the manufacturer in case of dispute. After discarding the outer 75 mm at both edges, three samples, at least 100 cm², shall be cut from the centre and both edges of the strip selected.

6. MARKING

Each roll of breather type building paper shall be marked with the following:

- (1) The number of this British Standard, i.e. BS 4016.
- (2) Length of roll in metres.

If the roll is wrapped, the markings shall be on the wrapping. If the roll is not wrapped, the markings shall be either on the roll itself or on a substantial label attached firmly to the roll.

NOTE 1. The mark BS 4016 on or in relation to the product is a claim by the manufacturer that it complies with the requirements of the standard.

NOTE 2. Attention is drawn to certification facilities offered by BSI; see the back cover of this standard.

APPENDIX A

RESISTANCE TO WATER PENETRATION

The test shall be carried out on one specimen of the material.

A representative piece of paper, circular in shape, shall be securely clamped over the base of a cylinder having a cross-sectional area of not less than 25 cm². A 0.05 % eosin or acid scarlet solution in water shall then be poured into the cylinder to a depth of 100 mm. The solution shall be at $20 \pm 2^{\circ}\text{C}$.

A filter paper shall be clamped in the underside of the specimen and the apparatus allowed to stand for the specified period at room temperature.

Report the specimen as 'free from stain' if the filter paper, when removed from the specimen, shows no trace of the coloured solution.

NZS 2295:1988
(BS 4016:1972).

NEW ZEALAND STANDARD

Specification for
BUILDING PAPERS
(BREATHER TYPE)

Pr AA

AMENDMENT A

June 1988

EXPLANATORY NOTE - Amendment A places on record the declaration of BS 4016:1972 as a New Zealand Standard and provides flexibility in the range of roll widths and sizes, and consistent with this, changes have been made to the Foreword, Section 1 Scope and Section 2 General. Performance levels have been set for fire retardancy and water absorption and the approved test method covering water absorption has been included as Appendix B. Changes have been made to the pH values. NZS 2295:1969 shall be revoked concurrently with the declaration of this Amendment.

To ensure receiving the next amendment to NZS 2295:1988 please complete and return the amendment request form.

DECLARATION IN NEW ZEALAND

BS 4016:1972 was declared on 17 June 1988 by the Standards Council to be a standard specification pursuant to the provisions of section 23 of the Standards Act 1965, and was designated NZS 2295:1988.

(Amendment A, June 1988)

PUBLICATION IN NEW ZEALAND

For use in New Zealand BS 4016:1972 requires the following additional text:

The term "British Standard":

The expression "this British Standard", where used shall mean and refer to "this New Zealand Standard".

(Amendment A, June 1988)

FOREWORD

Delete the third paragraph commencing "The recommendations" . . . and terminating "with modular components".

(Amendment A, June 1988)

1 SCOPE

Delete the word "dimensions" from the first line.

(Amendment A, June 1988)

2
GENERAL

2.1
Standard rolls

Delete the whole of 2.1 Standard rolls and **substitute**:

"The various lengths and widths of rolls shall be as determined by on-going market requirements and demands between end user and manufacturer".

2.2
Freedom from defects

Delete the words "the British Isles" in the second line and **substitute** the words "New Zealand".

(Amendment A, June 1988)

3.5
Reaction

Delete the values of "4.5" and "7.5" (in second and third lines) and **substitute** the values "6" and "9" respectively.

(Amendment A, June 1988)

Add a new clause 3.6 as follows:

"3.6
Fire retardancy

Any building papers claimed to be fire retardant breather type building papers shall have a flammability index of 5 or less when tested to Australian Standard AS 1530:Part 2:1973."

(Amendment A, June 1988)

Add a new clause as follows:

"3.7
Water absorption

Building papers for use with non-absorbent claddings (such as metal or plastic), shall have a minimum water absorbency of 100 g/m² as determined by the test method specified in Appendix B. "

(Amendment A, June 1988)

4.1

Delete the words "In the case of dispute" and **substitute** "Where appropriate or as the situation demands",

(Amendment A, June 1988)

6

MARKING

Delete the whole of section 6 and substitute:

"Breather type building papers manufactured in compliance with the New Zealand Standard shall be marked on the wrapping, on the roll itself if a wrapping is not supplied or on a substantial label attached to the roll. The following particulars shall be included:

- (a) The name, trade mark or other means of identification of the manufacturer;
- (b) The length of the roll in metres and/or the area in square metres;
- (c) The number of this New Zealand Standard NZS 2295.

NOTE - THE NEW ZEALAND STANDARD CERTIFICATION MARK SCHEME

As this Standard covers product quality, manufacturers are advised to apply for a licence to use the New Zealand Standard Certification Mark.

(Amendment A, June 1988)

Add a new Appendix B as follows:

***APPENDIX B**

WATER ABSORBENCY

The approved method of test for water absorbency shall be as follows:

- (a) Maintain samples not less than 100 mm x 100 mm at 20 ± 0.5 °C and 50 ± 1 % relative humidity for at least 48 hours;
- (b) Weigh the samples to obtain the unsoaked weight in grams;
- (c) Totally immerse the samples in water at 20 ± 0.5 °C for at least 24 hours;
- (d) Remove from water and store in a vertical position for approx. 1 min to allow surplus water to drain off;
- (e) Re-weigh the samples to obtain the soaked weight in grams;
- (f) Calculate the water absorbency (grams per square metre) of each sample as the difference between the soaked weight and the unsoaked weight (in grams) divided by the area of the sample (in square metres)."

(Amendment A, June 1988)

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WELLINGTON 1

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Further particulars of the terms of licence may be obtained from the Quality Assurance Department, British Standards Institution, Maylands Avenue, Hemel Hempstead, Herts.



ISBN : 0 580 07165 0

