BRITISH STANDARD

BS 743:1970

Incorporating Amendment Nos. 1, 2, 3 and 4

Specification for

Materials for damp-proof courses

UDC 699:82:691

Co-operating organizations

The committee responsible for the preparation of this British Standard consists of representatives of the following Government departments and scientific and industrial organizations:

Association of British Roofing Felt Manufacturers Ltd.
British Lead Manufacturers' Association
British Non-Ferrous Metals Federation
British Paper and Board Makers Association
British Plastics Federation
Confederation of British Industry
Copper Development Association
English Slate Quarries Association
Greater London Council
Institute of Petroleum
Institution of Municipal Engineers
Lead Development Association
Mastic Asphalt Council and Employers' Federation
Ministry of Public Building and Works
Ministry of Public Building and Works Building Research Station
National Federation of Building Trades Employers
National Federation of Clay Industries
North Wales Slate Quarries Association
Royal Institute of British Architects
Royal Institution of Chartered Surveyors

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The following BSI references relate to the work on this standard:
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Amendments issued since publication

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2503	March 1978	
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Contents

Foreword

This standard makes reference to the following British Standards and Special Publication:

BS 12, *Portland cement (ordinary and rapid-hardening).*

BS 146, *Portland-blastfurnace cement.*

BS 410, *Test sieves.*

BS 598, *Sampling and examination of bituminous mixtures for roads and buildings.*

BS 890, *Building limes.*

BS 1097, *Mastic asphalt for tanking and damp-proof courses (limestone aggregate).* [Included in BS 988, BS 1097, BS 1076, BS 1451. Mastic asphalt for building (limestone aggregate).]

BS 1178, *Milled lead sheet and strip for building purposes.*

BS 1200, *Sands for mortar for plain and reinforced brick-work; blockwalling and masonry.* (Included in BS 1198-1200. Building sands from natural sources).

BS 1418, *Mastic asphalt for tanking and damp-proof courses (natural rock asphalt aggregate).* [Included in BS 1162, BS 1410, BS 1418. Mastic asphalt for building (natural rock asphalt aggregate).]

BS 2870, *Rolled copper and copper alloys, sheet strip and foil.*

BS 3235, *Test methods for bitumen.*

BS 3921, *Clay bricks and blocks.*

BS 4027, *Sulphate-resisting Portland cement.*

BS 5642, *Sills and copings — Part 1: Specification for window sills of precast concrete, cast stone, clayware, slate and natural stone.*

BS 6398, *Specification for bitumen damp-proof courses for masonry.*

BS 6515, *Specification for polyethylene damp-proof courses for masonry.*

BS 8215, *Code of practice for design and installation of damp-proof courses in masonry construction.*

CP 3, *Code of basic data for the design of buildings — Chapter IX: Durability.*

DD 86, *Damp-proof courses.*

This metric revision of BS 743 has been prepared under the authority of the Building Divisional Council, as part of the change to the metric system in the construction industry, giving values in terms of SI units. For further information on SI units, reference should be made to PD 5686[1)].

This standard will eventually be superseded by new or existing standards covering the following classes of material for damp-proof courses:

1) Lead and copper, sheet thicknesses.

2) Bitumen damp-proof sheeting with varying base materials, indicating the filler content and the maximum softening point of the coating bitumen on the addition of filler.

3) Mastic asphalts, suitable for damp-proof courses.

4) Low density black polythene sheeting.

5) Materials used in mortars for bedding damp-proof courses, ordinary, rapid hardening, blastfurnace and sulphate resistant cements. Building limes and sands.

6) Slates, with the requirements for "wetting and drying" and sulphuric acid immersion tests.

7) Bricks and blocks manufactured from fired brickearth, clay or shale.

[1)] PD 5686, "*The use of SI units*".

Research is in progress to develop test methods as a basis for future performance based specifications for damp-proof courses (see DD 86).

Guidance on the design and installation of damp-proof courses is given in BS 8215. The importance of correct laying is emphasized since the efficiency of the damp-proof course depends as much on the method of use and workmanship employed as upon the intrinsic quality of the materials. In particular, the composition of the mortar and the workmanship used for bedding bricks and slates is of great importance when laying damp-proof courses near ground level.

Materials used as damp-proof courses in walls constructed with modular components designed in accordance with BS 4330[2)] and PD 6444[3)] should have widths in accordance with BS 4011[4)].

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.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 4, 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.

[2)] BS 4330, "*Recommendations for the co-ordination of dimensions in building. Controlling dimensions*".
[3)] PD 6444, "*Recommendations for the co-ordination of dimensions in building. Basic space for structure, external envelope and internal sub-division*".
[4)] BS 4011, "*Recommendations for the co-ordination of dimensions in building. Basic sizes for building components and assemblies*".

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1 Scope

This British Standard specifies requirements for the following materials suitable for use in the construction of damp-proof courses:

Lead
Copper
Bitumen
Mastic asphalt
Polythene
Slates
Bricks
Materials for mortar

2 Lead

Lead for use as a damp-proof course material shall comply with the requirements of BS 1178[5] and shall weigh not less than 19.5 kg/m^2 (Code No. 4: 1.80 mm thickness).

3 Copper

Copper for use as a damp-proof course material shall comply with the requirements of sections 2 and 7 of BS 2870:1980[6] for temper grade 0 (annealed) and shall be of minimum thickness 0.25 mm.

NOTE 1 If joints are to be welted grade C106 should be specified.
NOTE 2 Where the d.p.c. projects from the wall to form a drip or flashing the minimum thickness of the piece forming the drip or flashing should be increased to 0.50 mm.

4 Bitumen

Bitumen damp-proof courses for masonry shall comply with the requirements of BS 6398[7].

Bitumen damp-proof sheeting shall comply with the appropriate requirements of BS 6398[7] and shall have the following composition:

Nominal mass per unit area of base = 0.24.

Mass per unit area of base $\geqslant$ 0.18 kg/m^2.

Mass per unit area of bituminous material $\geqslant (2.6 + x)$ kg/m^2.

Mass of filler and surfacing within the range $(1.7 + y)$ to $(1.6 + x)$ kg/m^2.

Mass of assembled d.p.c. material $\geqslant$ 5.4 kg/m^2.

NOTE When measured as described in **A.1** of BS 6398:1983[7] x is equal to one-half of the excess mass of d.p.c. material and y is equal to one-third of the excess mass of d.p.c. material.

5 Mastic asphalt

A damp-proof course of mastic asphalt shall comply with, one of the following British Standards:

BS 1097, "*Mastic asphalt for tanking and damp-proof courses (lime-stone aggregate)*".

BS 1418, "*Mastic asphalt for tanking and damp-proof courses (natural rock asphalt aggregate)*".

6 Polyethylene

Polyethylene damp-proof courses for masonry shall comply with the requirements of BS 6515[8].

7 Slates

Any slate used as a damp-proof course material shall be not less than 230 mm long, and have a minimum thickness of not less than 4.0 mm.

When tested by the wetting and drying test method described in Appendix B of BS 5642-1:1978[9], it shall meet the requirements for Type B.

When tested by the sulphuric acid immersion test method for Type B slates described in Appendix A of BS 5642-1:1978[9] damp-proof course slates shall show no signs of delamination along the edges when examined through a lens giving a magnification of about two diameters, nor of swelling, softening or flaking of the surface, nor exhibit gaseous evolution during immersions.

A slate damp-proof course shall consist of at least two courses of slates laid to break joint, each slate being bedded in 1 : 0 to $^1/_4$: 3 cement/lime/sand in accordance with BS 8215.

8 Bricks

Bricks shall be fired-clay bricks complying with the requirements for damp-proof course bricks in BS 3921[10].

A brick damp-proof course shall consist of at least two courses of brick laid to break joint, each brick being bedded in 1 : 0 to $^1/_4$: 3 cement/lime/sand in accordance with BS 8215.

[5] BS 1178, "*Milled lead sheet and strip for building purposes*".
[6] BS 2870, "*Rolled copper and copper alloys, sheet strip and foil*".
[7] BS 6398, "*Specification for bitumen damp-proof courses for masonry*".
[8] BS 6515, "*Specification for damp-proof courses for masonry*".
[9] BS 5642, "*Sills and copings*" Part 1 "*Specification for window sills of precast concrete, cast stone, clayware, slate and natural stone*".
[10] BS 3921, "*Clay bricks and blocks*".

9 Mortar

The materials of mortar used for the bedding of damp-proof course materials shall comply with the relevant requirements of the following British Standards:

BS 12, "*Portland cement (ordinary and rapid-hardening)*".

BS 146, "*Portland-blastfurnace cement*".

BS 890, "*Building limes*".

BS 1200, "*Sands for mortar for plain and reinforced brickwork; block-walling and masonry*".

BS 4027, "*Sulphate-resisting Portland cement*".

10 Designation for ordering

When designating damp-proof course materials for the purposes of an enquiry or order, the following information shall be given:

1) Material and, in the case of bitumen, type letter.

2) British Standard number, i.e. BS 743.

3) Width, where applicable.

4) Length or weight or number required, as appropriate.

Appendix A *Text deleted*

Appendix B *Text deleted*

Appendix C *Text deleted*

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British Standards Institution

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BSI
389 Chiswick High Road
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W4 4AL