

Screeds, bases and in situ floorings —

Part 5: Code of practice for mastic asphalt underlays and wearing surfaces

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- British Aggregate Construction Materials Industries
- British Resin Manufacturers' Association
- Building Employers Confederation
- Chartered Institute of Building
- Concrete Society
- Contract Flooring Association
- Department of the Environment (Building Research Establishment)
- Department of the Environment (Property Services Agency)
- Federation of Associations of Specialists and Subcontractors
- Federation of Plastering and Drywall Contractors
- Federation of Resin Formulators and Applicators (FeRFA)
- Mastic Asphalt Council and Employers Federation
- Mortar Producers Association
- National Federation of Terrazzo-Marble and Mosaic Specialists
- Scottish Master Plasterers' Association
- Society of Chemical Industry

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Foreword

This Part of BS 8204 has been prepared under the direction of Technical Committee B/544 Plastering, rendering, dry lining, screeds and in situ floorings. It gives recommendations for mastic asphalt flooring in buildings applied, as an underlay or as a wearing surface, to a concrete base or screed. Annex A and Annex B give test methods for surface regularity and slip resistance respectively, and Annex C gives some characteristics of mastic asphalt.

A well laid mastic asphalt floor of the correct grade provides a hard, durable surface easily cleaned and not inherently slippery. It will carry heavy loads, providing care is taken to avoid static or mobile loads which may cause indentation. It is unaffected by water.

Mastic asphalt flooring is an adaptable material laid either as a wearing surface or as an underlay for decorative floor finishes. When laid as a mastic asphalt waterproofing membrane, it can be used in wet process areas or in areas where washing down is a requirement.

BS 8204-5 is one of a series dealing with in situ floorings; the other Parts of BS 8204 are as follows:

- *Part 1:1987: Code of practice for concrete bases and screeds to receive in-situ floorings;*
- *Part 2:1987: Code of practice for concrete wearing surfaces;*
- *Part 3:1993: Code of practice for polymer modified cementitious wearing surfaces;*
- *Part 4:1993: Code of practice for terrazzo wearing surfaces.*

An additional Part of BS 8204 dealing with cold setting resin wearing surfaces is to be prepared.

BS 8204-5 supersedes section 4 (the last remaining section) of CP 204-2:1970. Sections 5, 6 and 7 and Appendix A of CP 204-2:1970 have been deleted by amendment and CP 204-2:1970 is withdrawn.

As a code of practice, this British Standard takes the form of guidance and recommendations. It should not be quoted as if it were a specification and particular care should be taken to ensure that claims of compliance are not misleading.

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 16, 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.

1 Scope

This Part of BS 8204 gives recommendations for the types and grades of materials, design and work on site for in situ mastic asphalt for flooring applied as a wearing surface or underlay, incorporating waterproof membranes where required. The standard is applicable to mastic asphalt applied hot to concrete bases and screeds and concrete suspended floors. This Part of BS 8204 is intended to be read in conjunction with BS 8204-1:1987.

2 References

2.1 Normative references

This Part of BS 8204 incorporates, by dated or undated reference, provisions from other publications. These normative references are made at the appropriate places in the text and the cited publications are listed on the inside back cover. For dated references, only the edition cited applies; any subsequent amendments to or revisions of the cited publication apply to this British Standard only when incorporated in the reference by amendment or revision. For undated references, the latest edition of the cited publication applies, together with any amendments.

2.2 Informative references

This Part of BS 8204 refers to other publications that provide information or guidance. Editions of these publications current at the time of issue of this standard are listed on the inside back cover, but reference should be made to the latest editions.

3 Definitions

For the purposes of this Part of BS 8204, the definitions given in BS 6100-1.3.3:1987, BS 6100-2.4.1:1992 and BS 8204-1:1987 apply, together with the following.

3.1

coat

single layer of mastic asphalt

3.2

rubbing

process by which the last coat of mastic asphalt is given a matt surface finish by the use of clean sand

3.3

spreader

operative (craftsman) skilled in the laying and finishing of mastic asphalt

4 Exchange of information and time schedule

4.1 General

Consultations and exchange of information between all parties concerned with the building operations should be arranged at an early date, so that each may have full knowledge of the particulars of the work and be able to cooperate in producing the conditions required by the others to complete a satisfactory job.

4.2 Exchange of information

The designer should provide in good time all relevant information to those responsible for laying the flooring and to others whose work could be affected, including whichever of the following are applicable:

- a) description, situation and address of site and means of access;
- b) those conditions of contract which could practically affect this particular work;
- c) location and area of floors to be covered;
- d) age and nature of the base and any preparatory treatment required;
- e) finished floor level and maximum permissible departure from datum;
- f) class(es) of surface regularity required for the bases and the finished mastic asphalt flooring;
- g) type of damp-proofing;
- h) type and thickness of screed, if any;
- i) any work consequent upon services passing through the flooring;
- j) treatment of skirtings;
- k) treatment of junctions with adjacent floors and floorings;
- l) type of surface finish;
- m) any special requirements related to underfloor heating;
- n) date for the completion of preliminary work;
- o) dates for the start and completion of various sections of the floor;
- p) details of any conformity testing required;
- q) requirements relating to samples of mastic asphalt for testing purposes.

4.3 Provision of utilities, facilities and materials

To prevent misunderstanding, particularly at the tendering stage, and to avoid possible situations detrimental to installation, it should be made clear who will be responsible for providing the following:

- a) adequate clean, dry, lockable storage space, protected from frost (if necessary);
- b) secure storage compound for gas bottles, having a fence not less than 2 m high;
- c) adequate ventilation in confined areas;
- d) adequate artificial lighting, if required;
- e) provision of a suitable level site for the mixer or mixers, blocks of mastic asphalt, and where relevant coarse aggregate, as close as practicable to the work;
- f) unloading and hoisting facilities, if required.

4.4 Time schedule

In considering the schedule, in addition to the usual intervals between commencement and completion of work by the various trades involved, additional allowances should be made for the following:

- a) installation of all doors and windows and heating within the building, which is especially relevant to laying grade I flooring (see 5.1);
- b) laying of underfloor services; preferably this should be completed before the base is formed, as there is a risk of subsequent cracking if services are embedded in the flooring;
- c) curing and drying of the base concrete before the flooring is laid, where appropriate;
- d) cooling and hardening of the flooring;
- e) period of protection of the completed floor from damage by other trades, including restriction of access;
- f) siting of plant.

5 Materials and equipment

5.1 Mastic asphalt

The mastic asphalt should be one of the following:

- a) mastic asphalt for flooring conforming to type F1076 of BS 6925:1988;
- b) coloured mastic asphalt for flooring conforming to type F1451 of BS 6925:1988;
- c) mastic asphalt for paving conforming to BS 1447:1988;
- d) mastic asphalt for waterproofing conforming to type R988 or type T1097 of BS 6925:1988.

Types F1076 and F1451 mastic asphalt for flooring are graded according to usage as follows:

- grade I: special hard flooring;

- grade II: light duty flooring;
- grade III: medium duty flooring;
- grade IV: heavy duty flooring.

Types F1076 and F1451 do not cover grades of mastic asphalt for special applications such as chemical resistant, or spark free, flooring, for which purposes proprietary variants are available, nor are they suitable for external applications such as loading bays, balconies and rooftop car parks for which paving grade mastic asphalt is specified in BS 1447:1988.

For characteristics of mastic asphalt see Annex C. Mastic asphalt should be supplied cast into blocks suitable for transporting and handling or delivered to the site ready for use in hot-charge transporters.

5.2 Coarse aggregate

Coarse aggregate for grade IV flooring should be clean igneous or calcareous rock or siliceous material conforming to the limits given in Table 5 of BS 6925:1988.

Coarse aggregate for paving grades should be crushed rock conforming to the limits given in Table 3 of BS 1447:1988.

5.3 Separating membranes

The separating membrane should be one of the following:

- a) glass fibre tissue of mass 50 g/m² to 70 g/m²;
- b) black sheathing felt comprising a batt of jute fibre impregnated with bitumen.

5.4 Expanded metal lathing

Expanded metal lathing should be one of the following:

- a) bitumen coated plain expanded metal lathing with an aperture size of not less than 10 mm in the short way of mesh direction and not less than 0.46 mm thick;
- b) zinc coated steel, grade G 275 expanded metal lathing conforming to reference number L 2 of BS 1369-1:1987, suitably primed;
- c) stainless steel, grade 304 S15 expanded metal lathing conforming to reference number SL 1 of BS 1369-1:1987.

5.5 Sand for rubbing

Rubbing sand should be clean sand from natural deposits, predominantly passing a 600 µm test sieve and retained on a 212 µm test sieve, both conforming to BS 410.

5.6 High bond primer

A high bond primer, which is a modified synthetic rubber latex emulsion, should be used for application to vertical surfaces to provide a key.