

Coated macadam for roads and other paved areas —

Part 2: Specification for transport, laying and compaction

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by Technical Committee B/510, Road materials, to subcommittee B/510/1, Coated macadam and hot asphalt, upon which the following bodies were represented:

- British Aggregate Construction Materials Industries
- British Civil Engineering Test Equipment Manufacturers' Association
- British Tar Industry Association
- County Surveyors' Society
- Department of the Environment (Property Services Agency)
- Department of Transport (Highways)
- Department of Transport (Transport Research Laboratory)
- Institute of Asphalt Technology
- Institute of Petroleum
- Institution of Civil Engineers
- Institution of Highways and Transportation
- Mastic Asphalt Council and Employers' Federation
- Mastic Asphalt Producers' Association
- Refined Bitumen Association Ltd.
- Sand and Gravel Association Limited
- Society of Chemical Industry
- Coopted members

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Foreword

This Part of BS 4987 has been prepared under the direction of Technical Committee B/510, Road materials. It supersedes BS 4987-2:1988, which is withdrawn.

This edition introduces technical changes but it does not reflect a full review or revision of the standard, which will be undertaken in due course.

The standard comprises two Parts:

- *Part 1: Specification for constituent materials and for mixtures;*
- *Part 2: Specification for transport, laying and compaction.*

The requirements and recommendations for transporting coated macadam mixtures and for site work are covered by this Part of BS 4987. Guidance is given on re-surfacing work including the covering of concrete and sett paving, and on the use of tack coats where required.

Provision is made to measure compaction of certain types of macadam on the road in terms of the percentage refusal density (PRD) as described in BS 598-104.

It has been assumed in the drafting of this Part of BS 4987 that the execution of its provisions is entrusted to appropriately qualified and experienced people.

A British Standard does not purport to include all the necessary provision 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 and ii, pages 1 to 8, 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 4987 specifies the requirements for the transport, laying and compaction of coated macadam mixtures complying with Part 1 of this standard from the time that they leave the mixing plant until they are placed on the road ready to receive a superimposed layer or traffic. It also includes requirements for preliminary work at the laying site needed to ensure that the substrate is ready to receive the coated macadam. The standard does not include requirements for macadam incorporating bitumen emulsion binders; for these see BS 434. Neither does it specify inspection procedures because these normally form part of contractual requirements.

NOTE The titles of the publications referred to in this Part of BS 4987 are listed on the inside back cover.

2 Definitions

For the purposes of this Part of BS 4987, the definitions given in BS 6100 and BS 4987-1 apply.

3 Transport and delivery

3.1 Transport

3.1.1 Coated macadam other than those to be laid cold shall be transported to the site in insulated lorries and shall be sheeted so as to prevent an excessive drop in temperature and as a protection against adverse weather conditions.

3.1.2 Except in the case of porous asphalts, diesel oil shall not be used on the floor of the vehicle to facilitate the discharge of mixed material.

NOTE 1 The use of dust, sand, etc. on the floor of the vehicle may facilitate discharge, but the amount should be kept to a minimum by brushing.

NOTE 2 In the case of porous asphalt, dust, sand, etc. on the floor of the vehicle should not be used. However, to facilitate discharge, diesel oil and/or water may be applied sparingly to the floor of the vehicle and then, prior to loading, the body should be tipped to its fullest extent with tailboard open to ensure drainage of any excess.

3.2 Delivery

The macadam shall be delivered at a temperature which enables the material to be compacted in accordance with the requirements of clause 6.

NOTE For recommended suitable delivery temperatures see Table 4.

4 Preparatory works at the laying site

4.1 General

NOTE The existence of a sub-base or base of adequate strength to bear the equipment which will be used to lay the coated macadam is assumed. It is desirable that some form of permanent lateral support should be given to the layer of coated macadam.

The surface on which the coated macadam is to be laid shall be free from ice, standing water, loose materials and foreign matter. Any previous layer shall be compacted using a roller exerting at least as great a load per unit width of roll as that to be used for rolling the coated macadam.

4.2 Surface level tolerances

The sum of the deviations in the level of different pavement layers shall not result in a reduction of the nominal wearing course thickness by more than 12.5 % from that specified in Table 1.

NOTE For major road sites or similar areas the recommended permitted deviation of the level of the finished surface at any point on the constructed surface of the pavement layer from the true surface level should not exceed the following values:

- a) sub-base to receive road-base: $\begin{smallmatrix} +10 \\ -30 \end{smallmatrix}$ mm;
- b) road base to receive basecourse: ± 15 mm;
- c) basecourse to receive wearing course on roads: ± 6 mm;
- d) basecourse to receive wearing course on areas other than roads, e.g. car parks, playgrounds: ± 10 mm.

4.3 Resurfacing

4.3.1 General

4.3.1.1 Where an existing surface is to be used as a roadbase or basecourse, the maximum depression under a 3 m straightedge placed longitudinally or under a template placed transversely shall not exceed:

- a) 25 mm when the resurfacing is to consist of two course work; or
- b) 13 mm when the resurfacing is to be a single wearing course.

If improvement of the surface is required, it shall be carried out by hot or cold planing and/or by the addition of a regulating course.

NOTE 1 All weak places should be strengthened, major inequalities of profile remedied and depressions filled and thoroughly compacted prior to the laying of the macadam resurfacing.

NOTE 2 Every effort should be made to prevent water standing at the level of the bottom of the new material.

4.3.1.2 If the existing surface exhibits an excess of tar or bitumen, this excess shall be removed.

4.3.2 Overlaying existing concrete

Where coated macadam is to be laid on existing concrete with defective joints, in addition to the general requirements given in 4.3.1 the joints shall be made good by cleaning out and refilling with a joint-filling material. This material shall be compacted flush with the surface.

NOTE 1 The material used should not be adversely affected by, or itself adversely affect the surfacing.