



BS 598: Part 2: 1974

UDC 625.85:665.775.03:[620.11+543.8]

Specification for
**Sampling and examination of bituminous
mixtures for roads and other paved areas**

Part 2. Methods for analytical testing

British Standards Institution



Documents

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First published February, 1936
First revision August, 1940
Second revision June, 1950
Third revision April, 1958
Fourth revision as BS 598: Part 2, August, 1974

ISBN: 0 580 08344 6

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The following BSI references relate to the work on this standard:
Committee reference RDE/13 Draft for comment 72/43781DC

Co-operating organizations

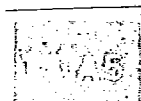
The Road Engineering Industry Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government departments and scientific and industrial organizations:

- | | |
|---|--------------------------------------|
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| Association of Consulting Engineers | *Institute of Petroleum |
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| *British Tar Industry Association | Institution of Civil Engineers |
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| Concrete Society | *Institution of Municipal Engineers |
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| *County Surveyors' Society | Ministry of Defence (Army) |
| *Department of the Environment | Refined Bitumen Association |
| *Department of the Environment (Transport and Road Research Laboratory) | Road Emulsion Association Limited |
| Federation of Civil Engineering Contractors | Road Surface Dressing Association |
| Federation of Manufacturers of Construction Equipment and Cranes | *Sand and Gravel Association Limited |
| | *Society of Chemical Industry |
| | *Individual experts |

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 this British Standard:

Mastic Asphalt Council and Employers' Federation

8711-8-0.4k-B





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Amendments issued since publication

Amd. No.	Date of issue	Text affected
4778	April 1985	Change of title

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Telex 266933

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Foreword

This Part of BS 598, in conjunction with Part 1, has been prepared under the authority of the Road Industry Standards Committee and specifies the methods to be used to test bituminous mixtures used for roads and other paved areas. The two parts supersede those parts of BS 598 : 1958, 'Sampling and examination of bituminous materials for roads and buildings' which dealt with these road materials. Part 1 covers all aspects of plant and site sampling whereas this part covers the laboratory treatment of samples forwarded for examination.

A new standard, BS . . . *, will cover the methods used to sample and test bituminous mixtures used in building but it should be noted that some mastic asphalts and pitchmastics are used for both applications. In such cases, whilst the methods of sampling may vary it is not intended that different test methods should be specified.

NOTE. Where metric sizes are mentioned in this standard, e.g. for nominal sizes for materials and for sieves etc., the imperial equivalent should be used when testing material supplied to an imperial specification.

The amount of sampling and testing of bituminous mixtures has increased very considerably since the 1958 edition was published and this increase has brought to light difficulties caused by differences in interpretation of the intention behind the standard. In this edition the test conditions have been more closely specified so that the risk of disagreement between the test results obtained by two laboratories sharing the same original sample, is reduced.

The repeatability and reproducibility values given in 4.9 are current estimates and should serve as a useful guide to the accuracy of the test procedures.

The test methods included are all capable of giving results of a sufficient degree of accuracy if carefully carried out in accordance with the prescribed procedure by a skilled operator although results obtained with different methods may not be identical.

For normal purposes it is now deemed sufficient to test only one sample.

It will be noted that the order in which the preparatory laboratory treatment is given has been changed from that given in the earlier edition of BS 598 and greater emphasis has been placed on the care needed in handling material that contains water.

The methods to be used for the determination of both the binder content and the aggregate grading are given in Clause 4. The sample mass specified for each single determination will normally give an adequate estimate of the grading. It is not necessary to comply with the masses specified in BS 812 'Methods of sampling and testing of mineral aggregates, sands and fillers' because of the much reduced risk of segregation when sampling coated materials.

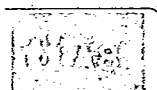
The method specified for the determination of that proportion of the mineral matter passing the 75 μm sieve by washing the aggregate with solvent over a sieve of that size (popularly known as wet-sieving) gives a more complete separation of this matter than dry separation and raises the problem of relating the content of this size material to that specified in current specifications for materials.

Until such time as it is found possible to make suitable adjustments to the materials specifications for this fraction it is highly desirable that a conversion factor for wet to dry passing 75 μm material be agreed between supplier and customer but for cases where this course is not possible a method of determining an appropriate factor is given in Appendix A.

A method differing from that previously specified for the recovery of certain soluble binders has been included. The results obtained from tests on the recovered bitumen need to be interpreted with great care to avoid arriving at misleading conclusions.

Before any of the tests are carried out laboratory technicians should acquaint themselves with the section on laboratory safety given in Appendix B.

* In course of preparation.



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Specification for

Sampling and examination of bituminous mixtures for roads and other paved areas

Part 2. Methods for analytical testing

1. Scope

This British Standard specifies methods of testing samples of bituminous mixtures that have been delivered to the testing laboratory, and gives guidance on laboratory safety.

The tests cover water content, binder content and grading of mineral aggregate, hardness number of mastic asphalt and the recovery of certain soluble binders for examination.

NOTE. The titles of the British Standards referred to in this standard are listed on the inside back cover.

2. Preparatory treatment of sample

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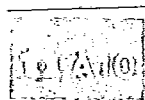
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3. Determination of water content

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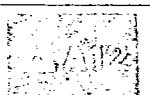
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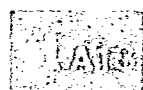
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