

Testing aggregates —

Part 100: General requirements for apparatus and calibration

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Cement, Gypsum, Aggregates and Quarry Products Standards Policy Committee (CAB/-) to Technical Committee CAB/2, upon which the following bodies were represented:

- Aggregate Concrete Block Association
- Association of Consulting Engineers
- Association of Consulting Scientists
- Association of Lightweight Aggregate Manufacturers
- Brick Development Association
- British Aggregate Construction Materials Industries
- British Cement Association
- British Ceramic Research Ltd.
- British Civil Engineering Test Equipment Manufacturers' Association
- British Geological Sciences
- British Precast Concrete Federation Ltd.
- British Ready Mixed Concrete Association
- British Steel Industry
- Building Employers Confederation
- Calcium Silicate Brick Association Limited
- Chartered Institute of Building
- Concrete Society
- County Surveyors' Society
- Department of the Environment (Building Research Establishment)
- Department of the Environment (Property Services Agency)
- Department of Transport
- Department of Transport (Transport and Road Research Laboratory)
- Electricity Supply Industry in England and Wales
- Federation of Civil Engineering Contractors
- Institute of Concrete Technology
- Institution of Civil Engineers
- Institution of Highways and Transportation
- Institution of Structural Engineers
- Institution of Water and Environmental Management
- Mortar Producers Association Limited
- Sand and Gravel Association Limited
- Society of Chemical Industry

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Foreword

This Part of BS 812 has been prepared under the direction of the Cement, Gypsum, Aggregates and Quarry Products Standards Policy Committee.

In the revision of BS 812:1975, each test, or collection of related tests, is being revised separately and is being issued as a separate Part or Section of this standard.

This Part includes definitions and symbols and specifies equipment common to the other Parts of BS 812.

Methods of calibration to be used for verifying and calibrating various apparatus when tests are to be used for compliance purposes are specified.

Apparatus that is restricted to a specific test is described in the Part concerned. In that case, reference to this Part is necessary only for general and calibration requirements.

It is intended that other British Standards should call up BS 812 test methods as the basis of compliance. Nevertheless it is *not* intended that aggregates should be subjected regularly to all the listed tests. Specifications in other standards should call up only relevant test methods.

It has been assumed in the drafting of this British Standard that the execution of its provision is entrusted to appropriately qualified and experienced people.

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, and 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.

0 Introduction

BS 812 is being revised into the following separate Parts.

- a) *Part 100: General requirements for apparatus and calibration.* This contains general information relating to the tests, definitions and symbols of BS 812. It also describes apparatus common to other Parts and includes methods for calibrating common and specific apparatus when the tests are used for compliance purposes.
- b) *Part 101: Guide to sampling and testing aggregates.* This gives general guidance on the sampling and testing of aggregates. It also gives guidance on the applicability of BS 812 to testing aggregates and describes procedures for assessing and use of precision data described in other Parts of BS 812.
- c) *Part 102: Methods for sampling.* This describes methods for obtaining samples of aggregates of the quantity required for carrying out testing in accordance with other Parts of BS 812. The method to be used for recording the nominal description of materials sampled is also given.
- d) *Part 103: Methods for determination of particle size distribution.* This describes two methods for the determination of the particle size distribution of samples of aggregates. It also includes a gravimetric method for the determination of the proportion of material finer than 20 μm in particle size in aggregates.
- e) *Part 104: Procedure for qualitative and quantitative petrographic examination of aggregates¹⁾.* This describes a general procedure for the examination of coarse or fine aggregate to determine petrographic composition and to assist in the assessment of those aggregates for potential suitability for the intended use.
- f) *Part 105: Methods for determination of particle shape.* This describes the methods for determining the flakiness index and elongation index of coarse aggregates.
- g) *Part 106: Method for determination of shell content in coarse aggregate.* This describes the method for the determination of the shell content of coarse aggregate.
- h) *Part 107: Methods for determination of particle density and water absorption¹⁾.* This describes the methods for the determination of the particle density and water absorption of aggregates.
- i) *Part 108: Methods for determination of bulk density, optimum moisture content, voids and bulking¹⁾.* This describes methods for the determination of the mass of a sample of the aggregate which fills a specified container. It also describes a method for the determination of the bulk density of fillers.
- j) *Part 109: Methods for determination of moisture content.* This describes various methods of determining the moisture content of aggregate. These include oven-drying and various rapid methods which may give adequate results for quality control purposes.
- k) *Part 110: Method for determination of aggregate crushing value (ACV).* This describes a method for the determination of the aggregate crushing value (ACV) which gives a relative measure of the resistance of an aggregate to crushing under a gradually applied compressive load. Methods are also described for different size fractions.
- l) *Part 111: Methods for determination of ten per cent fines value (TFV).* This describes methods for the determination of the ten per cent fines value (TFV) of aggregates. The methods give a relative measure of the resistance of an aggregate to crushing under a gradually applied compressive load. Procedures are described for testing aggregates in a dry condition or in a saturated surface dry condition.
- m) *Part 112: Method for determination of aggregate impact value (AIV).* This describes two methods for the determination of the aggregate impact value (AIV) which give a relative measure of the resistance of an aggregate to sudden shock or impact. Procedures are described for testing aggregates in a dry condition or in a saturated surface dry condition.
- n) *Part 113: Method for determination of aggregate abrasion value (AAV).* This describes a method for the determination of the aggregate abrasion value (AAV) which gives a measure of the resistance of aggregates to surface wear by abrasion.
- o) *Part 114: Method for determination of polished-stone value.* This describes a method for the determination of the polished stone value (PSV) which gives a measure of the resistance of aggregate to the polishing action of vehicle tyres.
- p) *Part 115:* This has not yet been allocated.
- q) *Part 116:* This has not yet been allocated.

¹⁾ In preparation.