BS 1881-125:2013

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Testing concrete —

Part 125: Methods for mixing and sampling fresh concrete in the laboratory

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Contents

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 8, an inside back cover and a back cover.

Foreword

Publishing information

This part of BS 1881 is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 30 April 2013. It was prepared by Subcommittee B/517/1, *Concrete production and testing*, under the authority of Technical Committee B/517, *Concrete*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This part of BS 1881 supersedes BS 1881-125:1986, which is withdrawn.

Relationship with other publications

BS 1881 is published in the following parts:

- BS 1881-113, *Method for making and curing no-fines cubes*;
- BS 1881-119, *Method for determination of compressive strength using portions of beams broken in flexure (equivalent cube method);*
- BS 1881-122, *Method for determination of water absorption*;
- BS 1881-124, *Methods for analysis of hardened concrete*;
- BS 1881-125, *Method for mixing and sampling fresh concrete in the laboratory*;
- BS 1881-128, *Method for analysis of fresh concrete*;
- BS 1881-129, *Method for the determination of density of partially compacted semi-dry fresh concrete*;
- BS 1881-130, *Method for temperature matched curing of concrete specimens*;
- BS 1881-131, *Methods for testing cement in a reference concrete*;
- BS 1881-201, *Guide to the use of non-destructive methods of test for hardened concrete*;
- BS 1881-204, *Recommendations on the use of electromagnetic covermeters*;
- BS 1881-206, *Recommendations for determination of strain in concrete*;
- BS 1881-207, *Recommendations for the assessment of concrete strength by near-to-surface tests*;
- BS 1881-208, *Recommendations for the initial surface absorption of concrete*;
- BS 1881-209, *Recommendations for the measurement of dynamic modulus of elasticity of concrete*;
- DD 216, *Determination of chloride content of fresh concrete*.

Information about this document

This part of BS 1881 complements BS EN 12350-1 which covers the sampling of concrete on site.

It is recognized that a wide range of concrete mixes are prepared in the laboratory so provision is made for modifications to the standard procedure and their detailed reporting [see **8.2.1**e)].

CAUTION. When cement is mixed with water, alkali is released. Take precautions to avoid dry cement entering the eyes, mouth and nose when mixing concrete. Prevent skin contact with wet cement or concrete by wearing suitable protective clothing. If cement or concrete enters the eye, immediately wash it out thoroughly with clean water and seek medical treatment without delay. Wash wet concrete off the skin immediately.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is "shall".

Requirements in this standard are drafted in accordance with *The BSI guide to standardization – Section 2: Rules for the structure, drafting and presentation of British Standards*, subclause **11.3.1**, which states, "Requirements should be expressed using wording such as: 'When tested as described in Annex A, the product shall ...'". This means that only those products that are capable of passing the specified test will be deemed to conform to this standard.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

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1 Scope

This part of BS 1881 describes basic methods for the preparation of materials and the batching, mixing and sampling of fresh concrete in the laboratory, where accurate controls of the quantities of materials and of test conditions are possible. The procedures are applicable when assessing the suitability of materials or determining suitable mix proportions for concrete for general use on site.

This part of BS 1881 is not applicable to special concrete mixes prepared for research, where the mixing procedure is determined by the properties of the constituents or of the resulting concretes that are being studied.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 8500 (all parts), *Concrete – Complementary British Standard to BS EN 206-1*

BS EN 196-7, *Methods of testing cement – Part 7: Methods of taking and preparing samples of cement*

BS EN 206-1, *Concrete – Part 1: Specification, performance, production and conformity*

BS EN 932-1, *Tests for general properties of aggregates – Part 1: Methods for sampling*

BS EN 1097-6, *Tests for mechanical and physical properties of aggregates – Part 6: Determination of particle density and water absorption*

BS EN 12350, (all parts) *Testing fresh concrete*

3 Terms and definitions

For the purpose of this part of BS 1881, the definitions given in BS EN 206-1 and BS 8500 (all parts) apply.

4 Apparatus

4.1 *Mixer,* rotating pan or tilting drum type of a capacity 10% to 50% greater than the maximum batch of concrete required to provide samples for the tests to be carried out.

4.2 *Scoop*, or similar sampling device, made from non-absorbent material not readily attacked by cement paste, suitable for taking increments of concrete.

4.3 *Hand tool*, suitable for turning mixed concrete.

5 Constituent materials

5.1 Sampling

If bulk samples are supplied, take subsamples for the test portions in accordance with BS EN 196-7 for cement and BS EN 932-1 for aggregate, ensuring that the materials used in each batch of concrete are representative of the bulk materials.