

Methods of test for

Soils for civil engineering purposes —

Part 5: Compressibility, permeability and durability tests

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Road Engineering Standard Policy Committee (RDB/-) to Technical Committee RDB/38, upon which the following bodies were represented:

- Association of Consulting Engineers
- British Civil Engineering Test Equipment Manufacturers' Association
- County Surveyors' Society
- Department of the Environment (Property Services Agency)
- Department of the Environment (Building Research Establishment)
- Department of Transport
- Department of Transport (Transport and Road Research Laboratory)
- Coopted members

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Foreword

This Part of BS 1377 has been prepared under the direction of the Road Engineering Standards Policy Committee. It is a part revision of clause 5 of BS 1377:1975 which is deleted by amendment.

BS 1377:1975 which has now been withdrawn is replaced by the following Parts of BS 1377:1990:

- *Part 1: General requirements and sample preparation;*
- *Part 2: Classification tests;*
- *Part 3: Chemical and electro-chemical tests;*
- *Part 4: Compaction-related tests;*
- *Part 5: Compressibility, permeability and durability tests;*
- *Part 6: Consolidation and permeability tests in hydraulic cells and with pore pressure measurement;*
- *Part 7: Shear strength tests (total stress);*
- *Part 8: Shear strength tests (effective stress);*
- *Part 9: In-situ tests.*

Reference should be made to Part 1 for further information about each of the Parts.

The following test procedures, additional to those described in the 1975 standard, have been introduced:

- a) swelling pressure and settlement on saturation measurements in an oedometer consolidation apparatus;
- b) determination of the coefficient of permeability of sands by the constant head permeameter method;
- c) determination of the susceptibility to internal erosion of clay soils, using three empirical tests:
 - 1) the pinhole method;
 - 2) the crumb method;
 - 3) the dispersion (sedimentation) method.
- d) determination of the susceptibility to frost heave, for which reference is made to BS 812-124.

Some amendments have been made to the one-dimensional oedometer consolidation test, which is nevertheless the same in principle as the test described in the 1975 standard.

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

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 and ii, pages 1 to 34, 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.