

Australian Standard<sup>®</sup>

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**Methods of testing rocks for  
engineering purposes**

**Part 0: General requirements  
and list of methods**

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This Australian Standard was prepared by Committee CE/9, Testing of Soils for Engineering Purposes. It was approved on behalf of the Council of Standards Australia on 29 March 1993 and published on 14 June 1993.

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The following interests are represented on Committee CE/9:

Australian Geomechanics Society

Austroroads

Department of Administrative Services—Australian Construction Services

Hydro-electric Commission, Tasmania

Melbourne and Metropolitan Board of Works

National Association of Testing Authorities, Australia

Rural Water Commission, Victoria

University of Melbourne

University of Sydney

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First published as AS 4133.0—1993.

## PREFACE

This Standard was prepared by the Standards Australia Committee on Testing of Soils for Engineering Purposes at the request of the Australian Geomechanics Society and engineers working in the geomechanics area.

The methods are concerned with rock as a natural material such as a foundation strata or as a tunnelling or mining environment. The methods given are laboratory index tests which will produce repeatable results on the same material.

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## LIST OF METHODS

Method number AS	Publication date	Title
4133.0	1993	Part 0: General requirements and list of methods
4133.1.1.1	1993	Method 1.1.1: Rock moisture content tests—Determination of the moisture content of rock—Oven drying method (standard method)
4133.2.1.1	1993	Method 2.1.1: Rock porosity and density tests—Determination of rock porosity and dry density—Saturation and calliper techniques
4133.2.1.2	1993	Method 2.1.2: Rock porosity and density tests—Determination of rock porosity and dry density—Saturation and buoyancy techniques
4133.3.1	1933	Method 3.1: Rock swelling and slake durability tests—Determination of the swelling strain developed in an unconfined rock specimen
4133.3.2	1993	Method 3.2: Rock swelling and slake durability tests—Determination of the swelling strain for a radially confined specimen with axial surcharge
4133.3.3	1993	Method 3.3: Rock swelling and slake durability tests—Determination of the swelling pressure index under conditions of zero volume change
4133.3.4	1993	Method 3.4: Rock swelling and slake durability tests—Determination of the slake durability index of rock samples
4133.4.1		Method 4.1:* Rock strength tests—Determination of the point load strength index
4133.4.2	1993	Method 4.2: Rock strength tests—Determination of the uniaxial compressive strength
4133.4.3	1993	Method 4.3: Rock strength tests—Determination of deformability of rock materials in uniaxial compression

\* In course of preparation

# STANDARDS AUSTRALIA

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## Australian Standard

### Methods of testing rocks for engineering purposes

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#### Part 0: General requirements and list of methods

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**1 SCOPE** This Standard is fundamental to all of the methods in the AS 4133 series. It provides the following information:

- (a) A list of methods in the AS 4133 series.
- (b) Referenced documents.
- (c) Definitions.
- (d) A list of the main apparatus used and the Standards with which that apparatus must comply.
- (e) A list of the quantity and unit symbols used.
- (f) Other supplementary information.

**NOTES:**

- 1 The methods listed are index tests intended only for classification and characterization of intact rock. The actual classification systems or basis of comparison between rocks is not the subject of this Standard or methods.
- 2 The methods are intended for situations where the rock has not been processed.

**2 REFERENCED DOCUMENTS** The following documents are referred to in the methods comprising this Standard:

AS

- 1152 Test sieves
- 1289 Methods of testing soils for engineering purposes
- 1726 Site investigations
- 2008 Residual bitumen for pavements
- 2102 Micrometer callipers for external measurement
- 2103 Dial gauges and dial test indicators (metric series)
- 2163 Graduated measuring cylinders
- 2164 One-mark volumetric flasks
- 2193 Methods for calibration and grading of force-measuring systems of testing machines
- 2378 Density bottles
- 2831 Thermometers—Solid stem—Long and short—For precision use