



Methods for sampling and testing aggregates

Method 22: Wet/dry strength variation



AS 1141.22:2019

This Australian Standard® was prepared by CE-012, Aggregates and Rock for Engineering Purposes. It was approved on behalf of the Council of Standards Australia on 9 September 2019.

This Standard was published on 4 October 2019.

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- Ash Development Association of Australia
- Australasian (iron & steel) Slag Association
- Australasian Procurement and Construction Council
- Australian Asphalt Pavement Association Limited
- Australian Geomechanics Society
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- Cement Concrete & Aggregates Australia — Aggregates
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- Engineering & Construction Laboratories Association
- National Association of Testing Authorities Australia
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This Standard was issued in draft form for comment as DR AS 1141.22:2019.

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ISBN 978 1 76072 585 3



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Originated as part of AS 1141—1974.
Revised and redesignated in part as AS 1141.22—1980.
Third edition 2008.
Fourth edition 2019.

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Preface

This Standard was prepared by the Standards Australia Committee CE-012, Aggregates and Rock for Engineering Purposes, to supercede AS 1141.22—2008, *Methods for sampling and testing aggregates, Method 22: Wet/dry strength variation*.

The objective of this Standard is to set out the method for determining the variation in strength of aggregate tested in both the oven dry and saturated surface dry condition.

The major changes in this edition are as follows:

- (a) Inclusion of this Preface.
- (b) Additional terms and definitions.
- (c) Deletion of the Appendix on Method Uncertainty.

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Australian Standard®

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Method 22: Wet/dry strength variation

1 Scope

This Standard sets out the method for determining the variation in strength of aggregate tested in both the oven dry and saturated surface dry condition.

This test may be performed on a range of size fractions, and on crushed spalls or crushed drill core.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document.

AS 1141.1, *Methods for sampling and testing aggregates, Part 1: Definitions*

AS 1141.2, *Methods for sampling and testing aggregates, Method 2: Basic testing equipment*

AS 2193, *Calibration and classification of force-measuring systems*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in AS 1141.1 and those below apply.

3.1

may

indicates the existence of an option

3.2

shall

indicates that a statement is mandatory

3.3

should

indicates a recommendation

3.4

strength

crushing force which, when applied to a known mass of coarse aggregate confined in a test cylinder of specified diameter, will produce fines amounting to 10 % of the dry mass of a test portion

4 Apparatus

Apparatus conforming to the relevant provisions of AS 1141.2 and the following shall be used:

- (a) *Absorbent cloth or towelling.*
- (b) *Balance* — Balance of sufficient capacity, with a limit of performance not exceeding ± 5 g for mass determinations greater than 2 kg, and ± 0.5 g for mass determinations 2 kg or less.
- (c) *Container* — A non-perforated container of sufficient size to contain the test portion during soaking.
- (d) *Cylinder* — An open-ended steel cylinder with a tapered plunger and baseplate. The form and dimensions of two sizes of cylinder, plunger and baseplate are given in [Figure 1](#) and [Table 1](#).