

AS 1141.23:2021



STANDARDS
Australia



Methods for sampling and testing aggregates

Method 23: Los Angeles value

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- ARRB (Australian Road Research Board)
- Ash Development Association of Australia
- Australasian (Iron & Steel) Slag Association
- Australasian Procurement and Construction Council
- Australian Flexible Pavement Association
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- Cement Concrete & Aggregates Australia — Aggregates
- Cement Concrete & Aggregates Australia — Cement
- Cement Concrete & Aggregates Australia — Concrete
- National Association of Testing Authorities Australia
- University of Technology Sydney

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Method 23: Los Angeles value

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Preface

This Standard was prepared by the Standards Australia Committee CE-012, Aggregates and Rock for Engineering Purposes, to supersede AS 1141.23:2009.

The objective of this document is to define procedures that determine the Los Angeles value for aggregates with maximum particle size between 9.5 mm and 53 mm. The procedure defines a series of standard test gradings. One of these gradings includes a defined percentage of flaky particles and this grading is useful for testing source rock.

The major changes in this edition are as follows:

- (a) Addition of this Preface.
- (b) Additional terms and definitions, see [Clause 3](#).
- (c) Inclusion of the variation between plant-produced samples and laboratory-crushed samples in test report, see [Clause 10](#).
- (d) Inclusion of a clause on Sampling, see [Clause 5](#).

[Appendix A](#) specifies the requirements for the Los Angeles testing machine in both text and drawings.

[Appendix B](#) provides an example of a laboratory work sheet that is designed to record all test data required by the method.

The terms “normative” and “informative” are used in Standards to define the application of the appendix to which they apply. A “normative” appendix is an integral part of a standard whereas an “informative” appendix is only for information and guidance.

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NOTES

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1 Scope

This document sets out the procedures for the determination of the loss, on abrasion, of aggregate particles by means of the Los Angeles abrasion testing machine. The test is applied to aggregate particles from crushed rock, gravel or crushed slag, or to crushings derived from rock spalls or drill cores. The maximum particle size is between 53 mm and 9.5 mm.

NOTE This method is a modification of ASTM C131.

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.

NOTE Documents referenced for informative purposes are listed in the bibliography.

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 1141.3.1, *Methods for sampling and testing aggregates, Method 3.1: Sampling — Aggregates*

AS 1141.3.2, *Methods for sampling and testing aggregates, Method 3.2: Sampling — Rock spalls and boulders*

AS 1141.15, *Methods for sampling and testing aggregates, Method 15: Flakiness index*

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

4 Apparatus

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

- (a) *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.
- (b) *Brushes* — Suitable for cleaning sieves, containers and the machine.
- (c) *Crusher* (or other suitable equipment) — For reducing the spalls and cores to the required sizes.