

AS 1141.11.1:2020



STANDARDS
Australia



Methods for sampling and testing aggregates

Method 11.1: Particle size distribution — Sieving method



Currently in review, click buy full version

AS 1141.11.1:2020

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 10 November 2020.

This Standard was published on 27 November 2020.

The following are represented on Committee CE-012:

- ARRB (Australian Road Research Board)
- Ash Development Association of Australia
- Australasian (iron & steel) Slag Association
- Australasian Procurement and Construction Council
- Australian Asphalt Pavement Association
- Australian Geomechanics Society
- Austrroads
- 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

This Standard was issued in draft form for comment as DR AS 1141.11.1:2020

Keeping Standards up-to-date

Ensure you have the latest versions of our publications and keep up-to-date about Amendments, Rulings, Withdrawals, and new projects by visiting:

www.standards.org.au

Methods for sampling and testing aggregates

Method 11.1: Particle size distribution — Sieving method

Originally as part of AS 1141—1974.
Revised and redesignated in part as AS 1141.11—1980.
AS 1141.11—1996 revised and redesignated in part as AS 1141.11.1—2009.
Second edition 2020.

© Standards Australia Limited 2020

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher, unless otherwise permitted under the Copyright Act 1968 (Cth).

Preface

This Standard was prepared by the Standards Australia Committee CE-012, Aggregates and Rock for Engineering Purposes, to supersede AS 1141.11.1—2009.

The objective of this document is to define procedures for measuring the particle size distribution of aggregate samples produced from rock, gravel, sand and recycled aggregate sources. The samples may be either plant produced, or laboratory crushed. The method uses standardized sieves in sizes between 75 mm and 75 μm .

The major changes in this edition are as follows:

- (a) Addition of a Preface.
- (b) Additional terms and definitions, see [Clause 3](#).
- (c) Addition of a new clause on sampling, see [Clause 5](#).
- (d) Addition of mandatory washing where testing evaluates a specification requirement for the passing 75 μm sieve, see [Clause 6.6](#).

The term “informative” is used in Standards to define the application of the appendices to which it applies. An “informative” appendix is only for information and guidance.

Contents

Preface	ii
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Apparatus	1
4.1 Required equipment	1
4.2 Optional equipment	2
5 Sampling	2
6 Preparation of test portion	2
6.1 General	2
6.2 Mixtures of coarse and fine aggregates	3
6.3 Preparation of test portion	3
6.4 Fillers for asphalt	3
6.5 Drying	3
6.6 Washing	3
7 Procedure	3
8 Calculations	5
9 Test report	5
Appendix A (informative) Work sheet for particle distribution by sieving	6
Bibliography	8

NOTES

Currently in preview, click buy full version

Australian Standard®

Methods for sampling and testing aggregates

Method 11.1: Particle size distribution — Sieving method

1 Scope

This document sets out the method for the determination of particle size distribution in coarse and fine aggregates by sieving. The amount passing a 75 µm sieve may be determined using AS 1141.12 or by the method given in this document when samples are washed over a 75 µm sieve. If the percentage of material passing a 75 µm sieve is specified, the procedures detailed in [Clause 6.6](#) of this method or in AS 1141.12 apply.

The procedure for the determination of fine particle size distribution by decantation is described in AS 1141.19.

2 Normative references

The following documents are referred to in the text in such a way that one 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*

3 Terms and definitions

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

3.1

may

indicates the existence of an option

3.2

shall

indicates that the statement is mandatory

3.3

should

indicates a recommendation

4 Apparatus

4.1 Required equipment

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

- (a) *Balances* — Sufficient capacity with a limit of performance not exceeding ± 5 g for the coarse fraction of aggregate and ± 0.5 g for the fine fraction of aggregate and fillers.