



# **Aggregates and rock for engineering purposes**

## **Part 7: Railway ballast**



This Australian Standard® was prepared by Committee CE-012, Aggregates and Rock for Engineering Purposes. It was approved on behalf of the Council of Standards Australia on 11 June 2015.

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The following are represented on Committee CE-012:

- ARRB Group
  - Ash Development Association of Australia
  - Australasian Procurement and Construction Council
  - Australasian Slag Association
  - Australian Asphalt Pavement Association
  - Australian Chamber of Commerce and Industry
  - Australian Geomechanics Society
  - Austroads
  - Bureau of Steel Manufacturers of Australia
  - Cement Concrete and Aggregates Australia
  - Engineering and Construction Laboratories Association
  - National Association of Testing Authorities Australia
  - Rail Industry Safety and Standards Board
  - The Institute of Quarrying Australia
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Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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Australian Standard<sup>®</sup>

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purposes**

**Part 7: Railway ballast**

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## PREFACE

This Standard was prepared by Standards Australia Committee CE-012, Aggregates and Rock for Engineering Purposes.

This Standard is Part 7 of the AS 2758 series of Standards which covers the specification of rocks and aggregates for engineering purposes. The other Parts are as follows:

- Part 0: Definitions and classifications
- Part 1: Concrete aggregates
- Part 2: Aggregate for sprayed bituminous surfacing
- Part 4: Aggregate for gabion baskets and wire mattresses
- Part 5: Asphalt aggregates
- Part 6: Guidelines for the specification of armourstone
- Part 7: Railway ballast (this Standard)

Part 3 of the AS 2758 series has never been published.

The objective of this Standard is to provide a basis for specifying requirements for aggregates intended for use as railway ballast.

This revision of AS 2758.7 has introduced the following changes to the 1996 edition:

- (a) Removal of the track classifications. Changes to track loadings and methods of track classification in Australia have made the earlier track classifications irrelevant. Ballast properties specified are equivalent to the previous 'H' classification.
- (b) Removal of wet strength and wet/dry strength variation requirements.
- (c) Inclusion of a graded ballast in the dimensional requirements.
- (d) Inclusion of a weak particle test requirement.
- (e) Inclusion of a testing recommendation for electrical resistivity in the ballast when railway signalling systems involve electrical track circuits.

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STANDARDS AUSTRALIA

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**Australian Standard**

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Part 7: Railway ballast

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## 1 SCOPE

This Standard provides a basis for specifying requirements for aggregates intended for use as railway ballast.

## 2 APPLICATION

This Standard is intended to be used in combination with a works specification for contract purposes. The requirements for all ballast aggregates are prescribed in Clauses 7 to 10 of this Standard.

Alternatives are provided for the assessment of durability in Clause 9. However, not more than one of these alternatives should be specified in the supply agreement. The specifier may make a selection from the options available in this Standard, or use alternative test methods and limits (which may be from Australian Standards or other appropriate Standards).

The selection of test procedures and test limits where alternatives are provided, and the frequency at which individual tests are required, is a subject for the individual supply agreement.

The works specification should specify all the tests appropriate to the source rock, but the whole range of tests is not necessarily applied to control acceptance of the product during the performance of a contract.

For contractual purposes, it is the works specification or supply agreement which is binding.

However, a case could arise where a contract document uses terms such as ‘material complying with AS 2758.7’ without providing a supply agreement. In this event, the supplier needs to obtain further details from the purchaser. In the continued absence of a supply agreement, material will be deemed to comply with AS 2758.7 if it satisfies the nominated grading, the requirements of Clauses 7 and 8, at least one of the durability requirements of Clause 9 and the requirements of Clause 10.

## 3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

### AS

- 1141 Methods for sampling and testing aggregates
- 1141.3.1 Method 3.1: Sampling—Aggregates
- 1141.4 Method 4: Bulk density of aggregate
- 1141.6.1 Method 6.1: Particle density and water absorption of coarse aggregate—Weighing-in-water method
- 1141.11.1 Method 11.1: Particle size distribution—Sieving method
- 1141.12 Method 12: Materials finer than 75 µm in aggregates (by washing)
- 1141.14 Method 14: Particle shape, by proportional calliper
- 1141.21 Method 21: Aggregate crushing value