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AS 2758.1—1998

Australian Standard®

Aggregates and rock for engineering purposes

Part 1: Concrete aggregates

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This Australian Standard was prepared by Committee CE/12, Aggregates and Rock for Engineering Purposes. It was approved on behalf of the Council of Standards Australia on 21 November 1997 and published on 5 February 1998.

The following interests are represented on Committee CE/12:

ARRB Transport Research

Australasian Railway Association

Australasian Slag Association

Australian Asphalt Pavement Association

Australian Geomechanics Society

Australian Premixed Concrete Association

Australian Stone Industry Association

AUSTROADS

Bureau of Steel Manufacturers of Australia

Cement and Concrete Association of Australia

CSIRO—Division of Building, Construction and Engineering

Crushed Stone Association of Australia

Crushed Stone Association (Qld)

Institute of Municipal Engineering Australia, New South Wales Division

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National Association of Testing Authorities, Australia

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Aggregates and rock for engineering purposes

Part 1: Concrete aggregates

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PREFACE

This Standard was prepared by the Standards Australia Committee CE/12, Aggregates and Rock for Engineering Purposes, to supersede AS 2758.1 — 1985.

This Standard is part of a series which covers specification of aggregates and rock. The other Parts are as follows:

Part 2: Aggregate for sprayed bituminous surfacing
Part 5: Asphalt aggregates
Part 7: Railway ballast

This Standard is called up by AS 3600, *Concrete structures*. In this Standard, extensive reference is made to AS 1141, *Methods for sampling and testing aggregates*, which is designed to include all aggregate tests, not only those for concrete.

The following clauses cover properties that are required to be known for a mix design and the works specification should provide choices or limits for them:

(a) Clause 7.1, for particle density.

(b) Clause 7.2, for bulk density.

(c) Clause 7.3, for water absorption.

(d) Clause 8.1, for particle size distribution.

(e) Clause 10, for alkali aggregate reactivity.

(f) Clause 14.3, for soluble salts if above the limits given.

The remaining aggregate properties in this Standard are given limits.

Durability of coarse aggregate is related to the use of concrete and its exposure and is not a mix design factor. The works specification should select an exposure classification and a method of assessment (see Clause 9.3).

NOTE: Exposure classifications for various uses of concrete can be found in Appendix A. Appendix B gives information on petrological terminology and classification of aggregate sources including particle shape and texture.

When works specifications are being drafted by consultants or engineers based on this Standard, it is intended that only one procedure be nominated for each property being specified. A specification is likely to lead to conflict if more than one procedure is specified for a particular property (see coarse aggregate durability).

It is recognized that satisfactory concrete can sometimes be made with aggregates which will not comply with this Standard in all respects, but the use of such aggregates should be authorized only after special testing or consideration of previous experience with the particular aggregates concerned.

It is also recognized that concrete for specialized requirements may necessitate more stringent limits for aggregates than those given in this Standard.

It should be noted that compliance with the grading requirements given in Tables 1 and 3 will not necessarily ensure the production of workable concrete in all mix proportions. The determination of mix proportions should be related to the actual nature and grading of the aggregates to be used.

The terms ‘normative’ and ‘informative’ have been used in this Standard 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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