



Supplementary cementitious materials

Part 2: Slag—Ground granulated blast-furnace

STANDARDS
Australia



This Australian Standard® was prepared by Committee BD-031, Supplementary Cementitious Materials. It was approved on behalf of the Council of Standards Australia on 11 January 2016.

This Standard was published on 12 February 2016.

The following are represented on Committee BD-031:

- Amorphous Silica Association of Australia
 - Ash Development Association of Australia
 - Australasian (iron and steel) Slag Association
 - Austroads
 - Bureau of Steel Manufacturers of Australia
 - Cement and Concrete Association of New Zealand
 - Cement Concrete and Aggregates Australia—Cement
 - Cement Concrete and Aggregates Australia—Concrete
 - Concrete Institute of Australia
 - Engineers Australia
 - University of New South Wales
 - University of Technology, Sydney
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This Standard was issued in draft form for comment as DR AS 3582.2:2015.

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[®]

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Part 2: Slag—Ground granulated blast-furnace

Original as AS 3582.2—1991.
Previous edition AS 3582.2—2001.
Third edition AS 3582.2:2016.
Reissued incorporating Amendment No. 1 (July 2016).

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Published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001, Australia

ISBN 978 1 76035 397 1

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee BD-031, Supplementary Cementitious Materials, to supersede AS 3582.2—2001, *Supplementary cementitious materials for use with portland and blended cement, Part 2: Slag—Ground granulated iron blast-furnace*.

This Standard incorporates Amendment No. 1 (July 2016). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this Standard is to set out the requirements for slag for use as a cementitious material in concrete, mortar and related applications.

The principal differences between this and the previous edition are the recognition of proven and unproven sources and amendments to sampling and testing requirements. The Standard now aligns with AS 2758 in terms of requirements for mitigating alkali silica reaction in concrete. It also aligns with AS 3972.

The term ‘informative’ has been used in this Standard to define the application of the appendix to which it applies. An ‘informative’ appendix is only for information and guidance.

Notes used in this Standard are of an advisory nature only and are used to give explanation or guidance to the user on recommended conditions or technical procedures, or to provide an informative cross-reference to other documents or publications. Notes to clauses in this Standard do not form a mandatory part for compliance with this Standard.

Statements expressed in mandatory terms in notes to tables are deemed to be requirements of this Standard.

This document includes commentary on some of the clauses of the Standard. The commentary directly follows the relevant clause, is designated by ‘C’ preceding the clause number and is printed in italics in a box. The commentary is for information and guidance and does not form part of the Standard.

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FOREWORD

The review of the AS/(NZS) 3582 series was a planned process aimed at contemporizing these material Standards which have not been reviewed for more than 13 years.

In planning and undertaking this project, a staged approach was considered in consultation with Standards Australia. That is, the project proponents consulted with, and sought the views of, major stakeholders prior to the commencement of the formal Standards review, through the joint Standards Australia/Standards New Zealand Committee BD-031. A collaborative pathway with Standards Australia was funded by industry to carry out the review.

The initial project review process encompassed various manufacturers, suppliers, users and academics with interest in these materials. Stakeholders were consulted through respective industry associations of the Ash Development Association of Australia, Australian (iron and steel) Slag Association, Amorphous Silica Association of Australia and Cement Concrete and Aggregates Australia. A series of consultative meetings were conducted which determined the review needed to provide a performance based approach, widening the Standards applications and methods of demonstrating compliance.

The formal review considered and adopted, where appropriate, international and national standards. Existing referenced standards documents were reviewed, changes proposed and elaborated upon, and supporting information collated, with consultation across appropriate membership groups to ensure alignment across the supply chain.

In summary, the major changes include the introduction of definitions for proven and unproven sources and corresponding testing frequencies, and incorporating product conformity requirements in the normative section which was previously in the 'informative' section.

STANDARDS AUSTRALIA

Australian Standard
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Part 2: Slag—Ground granulated blast-furnace

1 SCOPE

This Standard sets out minimum requirements for ground granulated blast-furnace slag for use as a cementitious material in concrete, mortar and related applications.

C1 It is acknowledged that ground granulated blast-furnace slag may be used in other applications, for example, alkali activated materials (e.g. geopolymer concrete) and stabilization.

2 APPLICATION

As this standard sets out minimum requirements, it may be necessary to supplement with related industry specifications as required.

C2 For slag used in concrete for high durability structures, typically those with a design life of 100 years or greater, supplementary specifications may be required.

3 NORMATIVE REFERENCES

The following are the normative documents referenced in this Standard:

NOTE: Documents referenced for informative purposes are listed in the Bibliography.

AS

2350	Methods of testing Portland, blended and masonry cements
2350.2	Method 2: Chemical composition
2350.9	Method 9: Determination of residue on the 45 µm sieve
3583	Methods of test for supplementary cementitious materials for use with Portland and blended cement
3583.1	Method 1: Determination of fineness by the 45 µm sieve
3583.3	Method 3: Determination of loss on ignition
3583.5	Method 5: Determination of relative density
3583.6	Method 6: Determination of relative water requirement and relative strength
3583.7	Method 7: Determination of sulfide content
3583.8	Method 8: Determination of sulfuric anhydride content
3583.9	Method 9: Determination of magnesia content
3583.10	Method 10: Determination of alumina and total iron content
3583.11	Method 11: Determination of manganese content
3583.12	Method 12: Determination of available alkali
3583.13	Method 13: Determination of chloride ion content
3583.14	Method 14: Determination of insoluble residue content
3972	General purpose and blended cements

AS/NZS

2350	Methods of testing Portland, blended and masonry cements
2350.1	Method 1: Sampling