AS 2503.2—2006
Reconfirmed 2017

AS 2503.2—2006

Australian Standard®

Refractories and refractory materials—Chemical analysis

Part 2: Aluminosilicate refractories

This Australian Standard® was prepared by Committee MN-007, Refractories and Refractory Materials. It was approved on behalf of the Council of Standards Australia on 7 June 2006. This Standard was published on 30 June 2006.

The following are represented on Committee MN-007:

- Australasian Ceramic Society
- Australasian Institute of Mining and Metallurgy
- Bureau of Steel Manufacturers of Australia
- CSIRO Manufacturing and Infrastructure Technology
- Cement Industry Federation
- Institute of Refractories Engineers
- Refractories Manufacturers Association of Australia
- The University of New South Wales

This Standard was issued in draft form for comment as DR 06086.

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 public comment period.

Keeping Standards up-to-date

Australian Standards® are living documents that reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued.

Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments that may have been published since the Standard was published.

Detailed information about Australian Standards, drafts, amendments and new projects can be found by visiting **www.standards.org.au**

Standards Australia welcomes suggestions for improvements, and encourages readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at **mail@standards.org.au**, or write to Standards Australia, GPO Box 476, Sydney, NSW 2001.

STANDARDS AUSTRALIA

RECONFIRMATION

OF
AS 2503.2—2006
Refractories and refractory materials—Chemical analysis
Part 2: Aluminosilicate refractories

RECONFIRMATION NOTICE

Technical Committee MN-007 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 19 August 2015.

The following are represented on Technical Committee MN-007:

Australian Ceramic Society
Bureau of Steel Manufacturers of Australia
Cement Industry Federation
CSIRO
Institute of Refractories Engineers
Refractories Manufacturers Association of Australia
The University of New South Wales

NOTES

Australian Standard®

Refractories and refractory materials—Chemical analysis

Part 2: Aluminosilicate refractories

Originated as part of AS R28—1965.
Previous edition of AS 2503.2—1996.
Third edition 2006.

Published by Standards Australia GPO Box 476, Sydney, NSW 2001, Australia

ISBN 0 7337 7588 8

PREFACE

This Standard was prepared by the Standards Australia Committee MN-007, Refractories and Refractory Materials, to supersede of AS 2503.2—1996, *Refractories and refractory materials—Chemical analysis*, Part 2: *Aluminosilicate refractories*. It describes the chemical analysis of aluminosilicate refractory materials.

Other parts of this Standard dealing with the chemical analysis of the other refractory materials, are as follows:

Part 1: Silica refractories

Part 3: High alumina materials

Part 4: Dolomites and magnesites

Part 5: Chrome-bearing materials

The Committee acknowledges the documented work of ISO/TC 33, Refractories, and the reference Standard BS 1902, *Methods of testing refractory materials*, which were used as source materials in the development of this Standard.

The objective of this revision is to bring the Standard into alignment with current style.

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.

CONTENTS

STANDARDS AUSTRALIA

Australian Standard
Refractories and refractory materials—Chemical analysis

Part 2: Aluminosilicate refractories

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out methods for the sampling, preparation of sample and analysis of aluminosilicate refractories and refractory materials. Procedures are described for determining—

(a) the loss on ignition; and

(b) the chemical composition, viz. the amount of silicon, phosphorus, aluminium, iron, titanium, manganese, calcium, magnesium, sodium, potassium and lithium present, expressed as the oxides of these elements.

Table 1.1 illustrates the typical composition of aluminosilicate refractories and the associated form of expression.

NOTE: A schematic presentation of the analytical procedures in this Standard is given in Appendix A.

TABLE 1.1

COMPOSITION OF ALUMINOSILICATE REFRACTORY MATERIALS

Constituent	Expressed as	Range, percent
Silicon dioxide	SiO_2	40 to 93
Aluminium oxide	Al_2O_3	5 to 46
Calcium oxide	CaO	0 to 5
Iron	Fe_2O_3	0 to 5
Potassium oxide	K_2O	0 to 5
Titanium(IV) dioxide	TiO_2	0 to 2
Magnesium oxide	MgO	0 to 1
Phosphorus pentoxide	P_2O_5	0 to 1
Manganese(II) oxide	MnO	0 to 0.5
Sodium oxide	Na_2O	0 to 0.5
Lithium oxide	Li_2O	0 to 0.5

