AS 2503.4—2006
Reconfirmed 2017

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Australian Standard®

Refractories and refractory materials—Chemical analysis

Part 4: Dolomites and magnesites

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 06070.

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.

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STANDARDS AUSTRALIA

RECONFIRMATION

OF
AS 2503.4—2006
Refractories and refractory materials—Chemical analysis
Part 4: Dolomites and magnesites

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.

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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 4: Dolomites and magnesites

Originated as AS R28—1965.
Previous edition AS 2503.4—1987.
Second edition 2006.

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

ISBN 0 7337 7590 X

PREFACE

This Standard was prepared by the Standards Australia Committee MN-007, Refractories and Refractory Materials, to supersede AS 2503.4—1987.

Other parts of the Standard describing the chemical analysis of other refractory materials are as follows:

Part 1: Silica refractories

Part 2: Aluminosilicate refractories

Part 3: High alumina materials

Part 5: Chrome-bearing materials

In preparing the original edition of this Standard, the Committee drew extensively upon the corresponding work of ISO/TC 33, Refractories, and the methods specified in BS 1902, *Methods of testing refractory materials*.

This Standard utilizes titrimetric, UV-Visible spectrophotometric and flame photometric methods of analysis and, like its companion parts, includes flow sheets depicting the scheme of analysis.

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 information and guidance.

CONTENTS

Page

STANDARDS AUSTRALIA

Australian Standard
Refractories and refractory materials—Chemical analysis

Part 4: Dolomites and magnesites

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

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

(a) the loss on ignition*;

(b) the chemical composition*, i.e. the amount of silicon, iron, titanium, manganese, chromium, aluminium, magnesium, calcium, sodium, potassium and lithium present in magnesites and dolomites, expressed as the oxides of these elements; and

(c) the boron content of magnesites expressed as boron (III) oxide.†

This Standard applies to dolomites and magnesites whose composition is typified by Table 1. It may be applicable to materials which fall outside these ranges subject to agreement between interested parties.

1.2 REFERENCED DOCUMENTS

The following Standards are referred to in this Standard:

AS	
2162	Verification and use of volumetric apparatus (series)
2497	Procedures for acceptance testing of refractory products
2497.1	Part 1: Batch procedure
2780	Refractories and refractory materials—Glossary of terms
3753	Recommended practice for the chemical analysis of materials by ultraviolet/visible spectrophotometry
AS/NZS	
2243	Safety in laboratories (series)

* The original paper on which the methods are based was written by Bennett, H. and Reed, R.A., *The ANALYST*, 96 (1971), pp 640-655.

† The method described is based on an article by Skelton, N.F.C. and Reed, R.A., *The ANALYST*, 101 (1976), pp 396–403.

