

Australian Standard™

**Prepared unshaped refractory materials**

**Part 2: Insulating**



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 6 March 2006.  
This Standard was published on 27 March 2006.

---

The following are represented on Committee MN-007:

Australasian Ceramic Society  
Australasian Institute of Mining and Metallurgy  
Australian Aluminium Council  
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

---

### **Keeping Standards up-to-date**

Standards are living documents which 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 Standards may also be withdrawn.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 which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Web Shop at [www.standards.com.au](http://www.standards.com.au) and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Global Standard*, has a full listing of revisions and amendments published each month.

Australian Standards™ and other products and services developed by Standards Australia are published and distributed under contract by SAI Global, which operates the Standards Web Shop.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at [mail@standards.org.au](mailto:mail@standards.org.au), or write to the Chief Executive, Standards Australia, GPO Box 476, Sydney, NSW 2001.

---

*This Standard was issued in draft form for comment as DR 05551.*

STANDARDS AUSTRALIA

---

**RECONFIRMATION**

**OF**

**AS 4045.2—2006**

**Prepared unshaped refractory materials  
Part 2: Insulating**

---

**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™

**Prepared unshaped refractory materials**

**Part 2: Insulating**

Originated as AS 4045.2—1995.  
Second edition 2006.

**COPYRIGHT**

© Standards Australia

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

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

ISBN 0 7337 7325 7

## PREFACE

This Standard was prepared by the Standards Australia Committee MN-007, Refractories and Refractory Materials, to supersede AS 4045.2—1995, *Prepared unshaped refractory materials, Part 2: Insulating*.

Part 1 of this Standard is a classification of dense materials.

The objective of this Standard is to provide manufacturers and users of refractories with a classification of insulating unshaped materials.

This revision has been editorially updated into current Standards Australia format.

## CONTENTS

	<i>Page</i>
1 SCOPE.....	4
2 REFERENCED DOCUMENTS.....	4
3 DEFINITIONS.....	4
4 TYPE OF USE.....	5
5 CLASSIFICATION .....	5
6 DESIGNATION.....	5

## STANDARDS AUSTRALIA

**Australian Standard**  
**Prepared unshaped refractory materials****Part 2: Insulating****1 SCOPE**

This Standard provides a classification and designation of prepared unshaped insulating refractory materials produced from chamotte, diatomaceous earth, exfoliated vermiculite, expanded fireclay grog, bubble alumina, perlite or other suitable materials.

**2 REFERENCED DOCUMENTS**

The following documents are referred to in this Standard:

AS

1152	Specification for test sieves
1774	Refractories and refractory materials—Physical test methods
1774.5	Method 5: The determination of density, porosity and water absorption
1774.13	Method 13: Permanent dimensional change
2780	Refractories and refractory materials—Glossary of terms

**3 DEFINITIONS**

For the purpose of this Standard, the definitions given in AS 2780 and those below apply.

**3.1 Granular size**

The mesh width of the finest sieve (complying with AS 1152) through which at least 95% by mass of the material passes.

**3.2 Hydraulic bond**

A bond that causes setting and hydraulic hardening at ambient temperature.

**3.3 Insulating refractory castables**

Mixtures of insulating refractory aggregate and bonding agents.

**3.4 Insulating refractory gunning materials**

Mixtures of insulating refractory aggregate and bonding agents, specially formulated for placing by pneumatic or mechanical projection.

**3.5 Organic bond**

A bond achieved by the addition of an organic material having binding or hardening characteristics.

NOTE: When several bonds are used conjointly, the bond is designated according to the nature of the bond that plays the principal part during the hardening.