Australian Standard™

# Refractory bricks and shapes

## Part 5: Magnesite, chrome

Standards Australia

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 14 March 2003 and published on 25 March 2003.

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The following are represented on Committee MN-007:

Australian Ceramic Society

Australasian Institute of Mining and Metallurgy

Australian Aluminium Council

Bureau of Steel Manufacturers of Australia

CSIRO—Manufacturing and Infrastructure Technology

Institute of Refractories Engineers

Refractories Manufacturers Association of Australia

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## PREFACE

This Standard was prepared by Standards Australia Committee MN-007, Refractories and Refractory Materials to supersede AS 1617.5—1993.

This Standard is based on ASTM C455-84, *Classification of chrome brick, chrome-magnesite brick, magnesite-chrome brick, and magnesite brick*, but has been extensively modified on the basis of additional information obtained from a survey of Australian refractories and available raw materials.

This Standard is aligned with, and a companion Standard to, AS 1617.3, *Refractory bricks and shapes*, Part 3: *High alumina*, and AS 1617.4, *Refractory bricks and shapes*, Part 4: *Silica.*

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STANDARDS AUSTRALIA

# Australian Standard
# Refractory bricks and shapes

## Part 5: Magnesite, chrome

## 1 SCOPE

This Standard specifies requirements for machine-made, basic refractory bricks.

This Standard deals with—

(a) classification in terms of composition and type of bonding;

(b) dimensional tolerances;

(c) texture and surface appearance; and

(d) permanent dimensional change after heating.

## 2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

| AS | |
|---|---|
| 1618 | Dimensions and preferred sizes for refractory bricks |
| 1774 | Refractories and refractory materials—Physical test methods |
| 1774.13 | Method 13: Permanent dimensional change |
| 1774.30 | Method 30: Drying and firing schedules |
| 2497 | Procedures for acceptance testing of refractory products |
| 2497.1 | Part 1: Batch procedure |
| 2780 | Refractories and refractory materials—Glossary of terms |

## 3 DEFINITIONS

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

## 4 MATERIAL

Bricks may be produced from dead burned magnesite, electrofused magnesia, chrome ore, magnesia-rich spinels or mixtures of the above.

## 5 CLASSIFICATION

### 5.1 Chemical composition

Bricks shall be classified according to their chemical composition in accordance with Clause 4 and the following:

(a) *Magnesite brick*—Having a magnesia content of not less than 80 percent.

(b) *Magnesite-chrome brick*—having a magnesia content of not less than 55 percent but less than 80 percent.

(c) *Chrome-magnesite brick*—having a magnesia content of not less than 25 percent but less than 55 percent.