Australian Standard™

Refractory bricks and shapes

Part 3: High alumina

Standards Australia

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PREFACE

This Standard was prepared by Standards Australia Committee MN-007, Refractories and Refractory Materials to supersede AS 1617.3—1993.

This Standard refers only to the main high-alumina refractory types produced by the Australian refractory industry and was originally developed from a survey of refractories and available raw materials used by that industry.

This Standard is a companion Standard to AS 1617.4, *Refractory bricks and shapes*, Part 4: *Silica* and AS 1617.5, *Refractory bricks and shapes*, Part 5: *Magnesite, chrome*.

It is emphasized that the assignment of certain AQL values is included in this Standard to provide guidance to the quality of the bricks/shapes specified herein. Users are entitled to specify other AQL values appropriate to the end use of the product, but any corresponding adjustments to the physical requirements must be in accordance with the quality specified herein.

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1 SCOPE

This Standard specifies requirements for machine-made high alumina refractory bricks and shapes.

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
1774.1 Method 1: Determination of cold compressive strength
1774.3 Method 3: Determination of cold modulus of rupture
1774.5 Method 5: The determination of density, porosity and water absorption
1774.13 Method 13: Permanent dimensional change

2497 Procedures for acceptance testing of refractory products
2497.1 Part 1: Batch procedure

2503 Refractories and refractory materials—Chemical analysis
2503.3 Part 3: High alumina materials

2780 Refractories and refractory materials—Glossary of terms

3 DEFINITIONS

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

3.1 High alumina refractory

A general name for all alumina-silicate refractories having an alumina content higher than that of pure, calcined kaolin, i.e. greater than 46% by mass.

4 MATERIALS

The bricks and shapes, classified in accordance with Table 1, shall be produced essentially from the predominant raw materials listed in Table 1.

5 CLASSIFICATION

The bricks and shapes are classified on the basis of the—

(a) predominant raw material;

(b) alumina content; and

(c) bond, in accordance with Table 1.

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