Australian Standard™

Refractory bricks and shapes

Part 4: Silica

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.

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

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Institute of Refractories Engineers

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PREFACE

This Standard was prepared by Standards Australia Committee MN-007, Refractories and Refractory Materials to supersede AS 1617.4—1993.

The classification for silica bricks is in agreement with that of ISO 1109:1975, *Refractory products—Classification of dense shaped refractory products*, and the scheme for the tabulated data was derived from a proposed revision of SABS 35—1949, *Standard specification for shaped refractory bricks,* by the South African Bureau of Standards.

This Standard is aligned with, and a companion Standard to, AS 1617.3, *Refractory bricks and shapes,* Part 3: *High alumina,* and AS 1617.5, *Refractory bricks and shapes*, Part 5: *Magnesite, chrome.*

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1 SCOPE

This Standard specifies requirements for refractory bricks and shapes having a maximum free quartz content of 5 percent by mass and produced essentially from silcrete, quartzite and ganister.

This Standard applies to machine-made silica refractory bricks and shapes used principally in the glass and steel industries.

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
1774.5	Method 5:	The determination of density, porosity and water absorption
1774.6	Method 6:	Determination of true density
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1774.27	Method 27:	Modulus of rupture at elevated temperatures
2497	Procedures for acceptance testing of refractory products	
2497.1	Part 1:	Batch procedure
2503	Chemical analysis of refractories and refractory materials	
2503.1	Part 1:	Silica refractory 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 Silica refractory

A material that in the fired state contains not less than 93 percent of silica by mass.

4 DIMENSIONS

Bricks may be of any size and shape. The preferred dimensions of regular shapes are those specified in AS 1618.