

AS 1774.3:2022



STANDARDS
Australia



Refractories and refractory materials — Physical test methods

Method 3: Determination of cold modulus of rupture



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AS 1774.3:2022

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- Australian Ceramic Society
- Australian Foundry Institute
- Australian Industry Group
- Bureau of Steel Manufacturers of Australia
- CSIRO
- Cement Industry Federation
- Institute of Refractories Engineers
- Materials Australia
- Minerals Council of Australia

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Method 3: Determination of compressive modulus of rupture

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Preface

This Test Method was prepared by the Standards Australia Committee MN-007, Refractories and Refractory Materials, to supersede AS 1774.3:2000.

The objective of this document is to set out the method for determining the cold modulus of rupture, under a three-point load system, of refractory bricks and monolithics.

The major changes in this edition are:

- (a) The inclusion of shapes specified in ISO 1927-5.
- (b) A change in the loading rates to align with ISO 5014.

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Australian Standard®

Refractories and refractory materials — Physical test methods

Method 3: Determination of cold modulus of rupture

1 Scope

This document sets out a method for determining the cold modulus of rupture, under a three-point load system, of refractory bricks and monolithics.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document.

NOTE Documents referenced for informative purposes are listed in the Bibliography.

AS 2193, *Calibration and grading of force-measuring systems of testing machines*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in AS 2780 and those below apply.

3.1

bearing

roll edges and sample surfaces of the test specimen through which the transverse stress is applied

3.2

cold modulus of rupture

maximum transverse stress, applied under specified conditions, that a refractory will withstand at room temperature

3.3

may

indicates the existence of an option

3.4

shall

indicates that a statement is mandatory

3.5

should

indicates a recommendation

4 Principle

A refractory test specimen is subjected to a constant rate of increase of transverse stress, at room temperature, until failure occurs.

5 Safety

For information on safety in laboratories, refer to the relevant parts of AS 2243.