Australian Standard®

Refractories and refractory materials—Physical test methods

Method 28: Ceramic fibre products—Test methods

PREFACE

This Standard was prepared by the Standards Australia Committee MN/7, Refractories and Refractory Materials, to provide methods for testing ceramic fibre products.

The tests are based on those presented in an international draft Standard on the methods of test for ceramic fibre refractory products.

The objective of this Standard is to provide those responsible for testing refractory fibres with standardized methods to minimize variability in results.

CONTENTS

METHOD

1 SCOPE This Standard sets out methods for determining the following properties of insulating refractory ceramic fibres:

(a) Thickness.

(b) Bulk density.

(c) Shrinkage.

(d) Thermal conductivity.

(e) Tensile strength.

(f) Shot content.

(g) Resilience.

2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

1774 Refractories and refractory materials—Physical test methods

1774.14 Part 14: Thermal conductivity

2243 Safety in laboratories

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 Resilience—the ability of ceramic fibres to spring back after compression to 50% of their thickness. In this test, it is measured as the relative thickness variation of a product after application, during a given time and relaxation, of a compressive stress that has reduced the product thickness to a given value.

3.2 Shot content—the percentage of non-fibrous particles retained on a 75 µm nominal aperture sieve.

3.3 Tensile strength—the maximum tensile stress per unit area that a material can withstand before it fails (expressed in pascals).

4 SAFETY This Standard may involve hazardous materials, operations and equipment. This Standard does not purport to address the safety problems associated with its use. It is the responsibility of the user of this Standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

Reference should be made to relevant parts of AS 2243, and to current editions of the following publications:

(a) Worksafe Australia: *Technical report on synthetic mineral fibres and guidance note on the membrane filter method for the estimation of airborne synthetic mineral fibres. June 1989.*

(b) Worksafe Australia: *National Standard for synthetic mineral fibres. National code of practice for the safe use of synthetic mineral fibres. May 1990.*

5 SAMPLING Because no sampling standard is available for these products, the number of items (e.g. blankets, felts) in a lot or batch is not specified.

Table 1 lists the number of test pieces that should be taken from each item.