Australian Standard™

Methods of test for vitreous enamel coatings

Method 1.2: Chemical tests—Determination of resistance of vitreous enamel coatings to boiling water and water vapour

PREFACE

This Standard was prepared by Standards Australia Committee CH-007, Vitreous Enamel Finishes to supersede AS 2219.1.2—1978.

This Standard is identical with and has been reproduced from ISO 2744:1998, *Vitreous and porcelain enamals—Determination of resistance to boiling water and water vapour.*

This Standard is Part 1.2 of a series of Standards covering the chemical testing of vitreous enamel coatings.

The series comprises the following Parts:

AS		
2219	Methods of test for vitreous enamel coatings	
2219.1.1	Method 1.1:	Determination of resistance of vitreous enamel coatings to hot sodium hydroxide
2219.1.2	Method 1.2:	Determination of resistance of vitreous enamel coatings to boiling water and water vapour
2219.1.3	Method 1.3:	Determination of resistance of vitreous enamel coatings to boiling hydrochloric acid
2219.1.5	Method 1.5:	Determination of resistance of vitreous enamel coatings to citric acid at room temperature

As this Standard is reproduced from an International Standard, the following applies:

(a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.

(b) In the source text, 'this international Standard' should read 'this Australian Standard'.

(c) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by Australian Standards, as follows:

Reference to International Standard		*Australian Standard*
ISO		AS
2723	Vitreous and porcelain enamels for sheet steel—Production of specimens for testing	—

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ISO		AS	
2724	Vitreous and porcelain enamels for cast iron—Production of specimens for testing	—	
2733	Vitreous and porcelain enamels —Apparatus for testing with acid and neutral liquids and their vapours	—	
3585	Borosilicate glass 3.3—Properties	—	
4788	Laboratory glassware—Graduated measuring cylinders	2163	Laboratory glassware—Measuring cylinders

1 Scope

This International Standard specifies a method of test for determining the resistance of flat surfaces of vitreous and porcelain enamels to pure boiling water and/or water vapour (see note 1).

This International Standard is also suitable for determining the resistance of vitreous and porcelain enamels to any other water for example to drinking water and river water.

The method is also applicable to determination of the resistance of enamels to the liquid and vapour phases of the corrosive medium.

NOTES

1 If temperatures below the boiling point of water are used this should be stated in the test report.

2 The resistance of vitreous and porcelain enamel to water generally depends on the pH value and of the substances in the water. In addition, the test results obtained in the liquid phase are influenced by the corrosion products of the vitreous and porcelain enamel and also of the borosilicate glass of the testing apparatus. Therefore, the test results obtained for different exposure times can differ (see also note in 8.1).

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 2723 : 1995,	*Vitreous and porcelain enamels for sheet steel - Production of specimens for testing.*
ISO 2724 : 1973,	*Vitreous and porcelain enamels for cast iron - Production of specimens for testing.*
ISO 2733 : 1983,	*Vitreous and porcelain enamels - Apparatus for testing with acid and neutral liquids and their vapours.*
ISO 3585 : 1991,	*Borosilicate glass 3.3 - Properties.*
ISO 4788 : 1980,	*Laboratory glassware - Graduated measuring cylinders.*

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