

STANDARDS AUSTRALIA

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**RECONFIRMATION**

**OF**

**AS 4459.14—1999**

**Methods of sampling and testing ceramic tiles  
Method 14: Determination of resistance to stains**

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**RECONFIRMATION NOTICE**

Technical Committee BD-044 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 21 January 2016.

The following are represented on Technical Committee BD-044:

Australian Industry Group  
Australian Stone Advisory Association  
Australian Tile Council  
Ceramic Tile Manufacturers Association of Australia  
Institute of Building Consultants  
Master Builders Australia  
Master Glazed Wall & Floor Tile Layers Association of SA  
Plastics and Chemicals Industries Association  
Property Council of Australia  
Surface Coatings Association Australia

## NOTES

# Australian Standard™

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## Methods of sampling and testing ceramic tiles

### Method 14: Determination of resistance to stains

[ISO title: Ceramic tiles, Part 14: Determination of resistance to stains]

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#### PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee BD/44, Fixing of Ceramic Tiles.

This Standard is technically equivalent to and is reproduced from ISO 10545-14:1995, *Ceramic tiles, Part 14: Determination of resistance to stains*, and Technical Corrigendum No. 1:1997.

This Standard is the result of a consensus among the representatives on the Joint committee that it be produced as an Australian Standard.

Appendix ZA lists a variation to ISO 10545-14:1995 for Australian conditions. Explanation for the basis of this variation is as follows:

Clause 7.1 has been modified to—

- (a) more precisely describe the test procedure; and
- (b) to permit an accelerated method of obtaining the same result.

The term ‘normative’ has been used in this Standard to define the application of the appendix to which it applies. A ‘normative’ appendix is an integral part of a Standard.

The changes to ISO 10545:1995 are indicated as follows:

- (i) Technical Corrigendum No.1:1997—by a single marginal bar.
- (ii) Appendix ZA—by a double marginal bar.

The marginal bars are set adjacent to the clause, table, figure, or part thereof.

For the purpose of this Australian Standard, the ISO/IEC text should be modified as follows:

- (a) *Terminology* The words ‘Australian Standard’ should replace the words ‘International Standard’ wherever they appear.
- (b) *Decimal marker* A full point should be substituted for a comma where it appears as a decimal marker.
- (c) *References* The references to International Standards should be replaced by references to the following Australian Standards:

*Reference to International Standard  
or other Publication*

*Australian Standard*

ISO  
10545 Ceramic tiles  
10545-7 Part 7: Determination of resistance  
to surface abrasion for glazed tiles

AS  
4459 Ceramic tiles  
4459.7 Part 7: Determination of resistance to  
surface abrasion for glazed tiles

## METHOD

### 1 Scope

This part of ISO 10545 specifies a method for determining the resistance to stains of the proper surface of ceramic tiles.

### 2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this part of ISO 10545. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this part of ISO 10545 are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 10545-7:—<sup>1)</sup>, *Ceramic tiles — Part 7: Determination of resistance to surface abrasion for glazed tiles.*

### 3 Principle

Determination of the resistance to stains by maintaining test solutions and materials in contact with the proper surface of the tiles for a suitable length of time; the surfaces are then subjected to defined cleaning methods, and finally inspected for visual changes.

### 4 Staining agents<sup>2)</sup>

#### 4.1 Stains leaving a trace (pastes)

**4.1.1 Green staining agent in light oil**, in accordance with the specifications of annex A.

**4.1.2 Red staining agent in light oil** (for green-coloured tiles only), in accordance with the specifications of annex B.

#### 4.2 Stains having chemical/oxidizing action

**4.2.1 Iodine**, 13 g/l solution in alcohol.

#### 4.3 Stains, forming a film

**4.3.1 Olive oil**, according to the definitions of the International Olive Oil Agreement (1979).

### 5 Cleaning

#### 5.1 Cleaning agents

**5.1.1 Hot water**, at a temperature of  $(55 \pm 5)$  °C.

**5.1.2 Weak cleaning agent**: a commercial agent, not containing abrasive, with a pH of 6,5 to 7,5.

1) To be published.

2) The stains specified are only examples of basic groups. There are many other staining materials which may, upon agreement by the parties concerned, be tested using the procedure specified in this part of ISO 10545.