



**NSAI**  
Standards

Irish Standard  
I.S. EN 16301:2013

# Natural stone test methods - Determination of sensitivity to accidental staining

© CEN 2013

No copying without NSAI permission except as permitted by copyright law.

## I.S. EN 16301:2013

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWIFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

*This document replaces:*

*This document is based on:*  
EN 16301:2013

*Published:*  
15 March, 2013

This document was published  
under the authority of the NSAI  
and comes into effect on:  
15 March, 2013

**ICS number:**

73.020  
91.100.15

**NSAI**  
1 Swift Square,  
Northwood, Santry  
Dublin 9

T +353 1 807 3800  
F +353 1 807 3838  
E standards@nsai.ie  
W NSAI.ie

**Sales:**  
T +353 1 857 6730  
F +353 1 857 6729  
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

ICS 73.020; 91.100.15

English Version

## Natural stone test methods - Determination of sensitivity to accidental staining

Méthodes d'essai pour les pierres naturelles -  
Détermination de la sensibilité au tachage accidentel

Prüfverfahren für Naturstein - Bestimmung der  
Empfindlichkeit gegen unbeabsichtigte Fleckenbildung

This European Standard was approved by CEN on 12 January 2013.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Contents

Page

<b>Foreword</b> .....	<b>3</b>
<b>1 Scope</b> .....	<b>4</b>
<b>2 Normative references</b> .....	<b>4</b>
<b>3 Terms and definitions</b> .....	<b>4</b>
<b>4 Principle</b> .....	<b>5</b>
<b>5 Apparatus</b> .....	<b>5</b>
<b>6 Preparation of specimens</b> .....	<b>6</b>
6.1 Sampling .....	6
6.2 Test specimens .....	7
6.2.1 Surface finish .....	7
6.2.2 Dimensions.....	7
6.2.3 Testing environment .....	7
6.2.4 Pre-conditioning and treatment of the specimens .....	7
<b>7 Procedure</b> .....	<b>7</b>
7.1 Documentation of the test specimens.....	7
7.2 Staining agents to be used in the standard test.....	8
7.3 Staining procedure .....	8
7.4 Cleaning procedure .....	8
<b>8 Evaluation of staining and expression of the result</b> .....	<b>9</b>
<b>9 Precision</b> .....	<b>9</b>
<b>10 Test report</b> .....	<b>9</b>
<b>Annex A (normative) Specification of staining agents</b> .....	<b>11</b>
<b>Annex B (informative) Colour pictures to facilitate the evaluation of staining</b> .....	<b>12</b>
<b>Bibliography</b> .....	<b>17</b>

## **Foreword**

This document (EN 16301:2013) has been prepared by Technical Committee CEN/TC 246 “Natural stones”, the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2013, and conflicting national standards shall be withdrawn at the latest by September 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## 1 Scope

The European Standard specifies a method to assess the sensitivity of natural stones when exposed to accidental staining. It defines a procedure for the application of the stains, the cleaning and the assessment of the surface appearance after cleaning. It also covers the possibility to assess the efficiency of a surface treatment. Note that the method does not intend to present any de-staining technique.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 11664-2, *Colorimetry – Part 2: CIE standard illuminants (ISO 11664-2)*

EN ISO 11998, *Paints and varnishes – Determination of wet-scrub resistance and cleanability of coatings (ISO 11998)*

ISO 1065, *Non-ionic surface-active agents obtained from ethylene oxide and mixed non-ionic surface-active agents – Determination of cloud point*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### **surface finishing**

final surface texture applied to a stone during processing

### 3.2

#### **matt finished surface**

surface treatment to produce a very flat, uniform, but no polished finish

Note 1 to entry: Matt finished surface can be obtained by means of a silicon carbide bonded polishing disk with grain size F 400 mesh.

### 3.3

#### **surface treatment**

application of certain materials (i.e chemicals) to the exposed face of a slab

[SOURCE: EN 12670:2001, 2.4.29]

### 3.4

#### **impregnation**

protection of the surface of a stone by a pore-sealing product or a chemical coating

### 3.5

#### **staining agent**

liquid used to produce stains on the surface of the stone

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- Looking for additional Standards? Visit Intertek Inform Infostore
  - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-