



NSAI
Standards

Irish Standard
I.S. EN 12004-1:2017

Adhesives for ceramic tiles - Part 1:
Requirements, assessment and verification of
constancy of performance, classification and
marking

I.S. EN 12004-1:2017

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/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:

EN 12004-1:2017

Published:

2017-02-15

This document was published under the authority of the NSAI and comes into effect on:

2017-03-06

ICS number:

83.180

91.100.10

NOTE: If blank see CEN/CENELEC cover page

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

National Foreword

I.S. EN 12004-1:2017 is the adopted Irish version of the European Document EN 12004-1:2017, Adhesives for ceramic tiles - Part 1: Requirements, assessment and verification of constancy of performance, classification and marking

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This page is intentionally left blank

EUROPEAN STANDARD

EN 12004-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2017

ICS 83.180; 91.100.10

Supersedes EN 12004:2007+A1:2012

English Version

**Adhesives for ceramic tiles - Part 1: Requirements,
assessment and verification of constancy of performance,
classification and marking**

Colles à carrelage - Partie 1: Exigences, évaluation et
vérification de la constance de performance,
classification et marquage

Mörtel und Klebstoffe für keramische Fliesen und
Platten - Teil 1: Anforderungen, Bewertung und
Überprüfung der Leistungsbeständigkeit, Einstufung
und Kennzeichnung

This European Standard was approved by CEN on 28 November 2016.

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

European foreword.....	4
Introduction	5
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions	6
3.1 General.....	6
3.2 Products.....	7
3.3 Tools and working methods.....	7
3.4 Application properties.....	7
3.5 Final properties	8
3.6 Characteristics	8
4 Product characteristic.....	9
4.1 Cementitious adhesives (C)	9
4.2 Dispersion adhesives (D)	11
4.3 Reaction resin adhesives (R)	11
4.4 Reaction to fire.....	12
4.4.1 General.....	12
4.4.2 Adhesives classified as Class A1 without the need for testing (CWT).....	12
4.4.3 Adhesives classified as class E without the need for further testing (CWFT)	12
4.4.4 Adhesives classified according to the test results.....	13
4.5 Resistance to chemical attack.....	13
4.6 Release of dangerous substances.....	14
5 Testing, assessment and sampling methods	14
6 Assessment and verification of constancy of performance (AVCP)	14
6.1 General.....	14
6.2 Type testing.....	14
6.2.1 General.....	14
6.2.2 Test samples, testing and compliance criteria	15
6.2.3 Test reports.....	17
6.2.4 Shared other party results.....	17
6.3 Factory production control (FPC)	17
6.3.1 General.....	17
6.3.2 Requirements	18
6.3.3 Product specific requirements.....	21
6.3.4 Initial inspection of factory and of FPC	22
6.3.5 Continuous surveillance of FPC.....	22
6.3.6 Procedure for modifications	22
6.3.7 One-off products, pre-production products (e.g. prototypes) and products produced in very low quantity	23
7 Classification and designation.....	23
8 Marking and labelling.....	26

Annex ZA (informative) Relationship of this European Standard with Regulation (EU) No. 305/2011	27
ZA.1 Scope and relevant characteristics	27
ZA.2 System of Assessment and Verification of Constancy of Performance (AVCP)	30
ZA.3 Assignment of AVCP tasks	30
Bibliography	33

EN 12004-1:2017 (E)

European foreword

This document (EN 12004-1:2017) has been prepared by Technical Committee CEN/TC 67 “Ceramic tiles”, 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 August 2017, and conflicting national standards shall be withdrawn at the latest by November 2018.

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

This document supersedes EN 12004:2007+A1:2012.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) for construction works of Regulation No. 305/2011.

For relationship with this Regulation, see informative Annex ZA, which is an integral part of this document.

The significant technical changes between this European Standard and the previous edition are listed herewith:

- Clause 3.6.1 replacement of the term “Fundamental” with “Basic”;
- Clause 4, Tables 1, 2 and 3;
- New Clause 5;
- New Clause 6 in accordance with CEN guidance documents;
- New Annex ZA (informative) in accordance with the CPR (Regulation (EU) No. 305/2011) and the Commission Delegated Regulations (EU) No. 157/2014 relative to DoP made available on websites, (EU) No. 574/2014 relative to the Model of DoP and (EU) No. 568/2014 relative to the assessment and verification of constancy of performance.

According to the CEN-CENELEC Internal Regulations, the national standards organizations 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

It is essential that the characteristics of the construction products defined in this standard consider that the normal stresses due to the works for which they are intended, assembled or installed, can be properly accommodated. Some special characteristics will take into account the type of substrate and that the adhesives should resist the degrading actions of climate, etc.

Many properties of adhesives for tiling are mainly determined by the type of binders used. Different types of tile adhesives are defined according to the chemical nature of their binders.

The different types of adhesives for ceramic tiles have specific characteristics in terms of their application properties and final performance.

The relationship between characteristics and the working conditions (dry or humid conditions, hot climate, fast setting, etc.) is not given in this standard.

The manufacturer should give information about the use of the product and the correct conditions of use.

The specifier should evaluate the state of the job site (mechanical and thermal influences) and choose the appropriate product considering all the possible risks.

EN 12004-1:2017 (E)

1 Scope

This European Standard is applicable to the following three types of adhesives for ceramic tiles, i.e. cementitious ones for internal and external tile installations, dispersion and reaction resin ones for internal tile installations, on walls and floors.

This European Standard gives the terminology concerning the products, working methods, application properties, etc, for ceramic tile adhesives.

This European Standard specifies the performance requirements for the adhesives for ceramic tiles.

It also specifies the appurtenant test methods, assessment and verification of constancy of performance (AVCP), as well as classification, designation and marking of adhesives for ceramic tiles.

This European Standard does not provide criteria or recommendations for the design and installation of ceramic tiles.

Ceramic tile adhesives may also be used for other types of tiles (natural and agglomerated stones, etc.), if they do not adversely affect these materials.

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 12004-2:2017, *Adhesives for ceramic tiles — Part 2: Test methods*

EN 12808-1, *Grouts for tiles — Part 1: Determination of chemical resistance of reaction resin mortars*

EN 13238, *Reaction to fire tests for building products — Conditioning procedures and general rules for selection of substrates*

EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*

EN 14411, *Ceramic tiles — Definition, classification, characteristics, assessment and verification of constancy of performance and marking*

3 Terms and definitions

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

3.1 General

3.1.1

thin bed method

method used for installing tiles onto a plane surface with an adhesive

Note 1 to entry: The adhesive is usually applied with a trowel to obtain a layer and then combed with a notched trowel to achieve the right thickness and planarity.

3.1.2

fixing surface

plane rigid surface upon which the tile is fixed

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](#)
-