Irish Standard
I.S. EN 1015-12:2016

Methods of test for mortar for masonry - Part 12: Determination of adhesive strength of hardened rendering and plastering mortars on substrates

I.S. EN 1015-12:2016

Incorporating amendments/corrigenda/National Annexes issued since publication:

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

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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):

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Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

I.S. EN 1015-12:2016 is the adopted Irish version of the European Document EN 1015-12:2016, Methods of test for mortar for masonry - Part 12: Determination of adhesive strength of hardened rendering and plastering mortars on substrates

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

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1015-12

June 2016

ICS 91.100.10

Supersedes EN 1015-12:2000

English Version

Methods of test for mortar for masonry - Part 12: Determination of adhesive strength of hardened rendering and plastering mortars on substrates

Méthodes d'essai des mortiers pour maçonnerie - Partie 12 : Détermination de l'adhérence des mortiers d'enduit durcis appliqués sur supports

Prüfverfahren für Mörtel für Mauerwerk - Teil 12: Bestimmung der Haftfestigkeit von erhärteten Putzmörteln

This European Standard was approved by CEN on 9 April 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 1015-12:2016) has been prepared by Technical Committee CEN/TC 125 “Masonry”, the secretariat of which is held by BSI.

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 December 2016, and conflicting national standards shall be withdrawn at the latest by March 2018.

This document supersedes EN 1015-12:2000.

The following technical changes have been done in this new edition:

— There has been a relaxation in the choice of metal for the pull-head plates.

— The temperature range for storage and curing the specimens has been extended slightly.

— The substrates may be rendered stored and tested either in the vertical or horizontal attitude instead of the vertical only.

EN 1015, *Methods of test for mortar for masonry*, currently comprises the following parts:

— *Part 1: Determination of particle size distribution (by sieve analysis)*;

— *Part 2: Bulk sampling of mortars and preparation of test mortars*;

— *Part 3: Determination of consistence of fresh mortar (by flow table)*;

— *Part 4: Determination of consistence of fresh mortar (by plunger penetration)*;

— *Part 6: Determination of bulk density of fresh mortar*;

— *Part 7: Determination of air content of fresh mortar*;

— *Part 9: Determination of workable life and correction time of fresh mortar*;

— *Part 10: Determination of dry bulk density of hardened mortar*;

— *Part 11: Determination of flexural and compressive strength of hardened mortar*;

— *Part 12: Determination of adhesive strength of hardened rendering and plastering mortars on substrates* (the present document);

— *Part 17: Determination of water-soluble chloride content of fresh mortars*;

— *Part 18: Determination of water absorption coefficient due to capillary action of hardened mortar*;

— *Part 19: Determination of water vapour permeability of hardened rendering and plastering mortars*;

— *Part 21: Determination of the compatibility of one-coat rendering mortars with substrates*.

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

This European Standard specifies a method for the determination of the adhesive strength between rendering and plastering mortars and a substrate.

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 772-11, *Methods of test for masonry units - Part 11: Determination of water absorption of aggregate concrete, autoclaved aerated concrete, manufactured stone and natural stone masonry units due to capillary action and the initial rate of water absorption of clay masonry units*

EN 998 (all parts), *Specification for mortar for masonry*

EN 1015-2, *Methods of test for mortar for masonry - Part 2: Bulk sampling of mortars and preparation of test mortars*

EN 1015-3, *Methods of test for mortar for masonry - Part 3: Determination of consistence of fresh mortar (by flow table)*

EN 1015-11, *Methods of test for mortar for masonry - Part 11: Determination of flexural and compressive strength of hardened mortar*

3 Principle

The adhesive strength is determined as the maximum tensile stress applied by a direct load perpendicular to the surface of the rendering or plastering mortar on a substrate. The tensile load is applied by means of a defined pull-head plate glued to the test area of the mortar surface. The adhesive strength obtained is the quotient between the failure load and the test area.

4 Symbols

f_u is the adhesive strength, (N/mm^2);

F_u is the failure load, (N);

A is the test area of cylindrical specimen, (mm^2).

5 Apparatus

5.1 Truncated conical rings, (see Figure 1) made of stainless steel or brass, with internal diameter of (50 ± 0,1) mm and (25 ± 0,5) mm in height.

The minimum thickness of the mould wall shall be 5,0 mm at the top. The external diameter at the base shall be (51 ± 0,1) mm.

5.2 Circular pull-head plates, made of metal, with diameter of (50 ± 0,1) mm and minimum thickness 10 mm, and with central fitting for connection to the direct pull tensile force apparatus.