



**NSAI**  
Standards

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:*

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 1015-12:2016

*Published:*

2016-06-08

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

2016-06-27

ICS number:

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 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.

**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 1015-12

NORME EUROPÉENNE

EUROPÄISCHE NORM

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.



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.....	3
1 Scope .....	5
2 Normative references .....	5
3 Principle .....	5
4 Symbols.....	5
5 Apparatus.....	5
6 Sampling and sample preparation.....	6
6.1 General.....	6
6.2 Laboratory prepared mortars.....	6
6.3 Mortars, other than laboratory prepared mortars.....	7
7 Preparation and storage of test specimens .....	7
7.1 Substrate .....	7
7.2 Application .....	7
7.3 Test areas.....	7
7.3.1 General.....	7
7.3.2 Fresh mortar.....	7
7.3.3 Hardened mortars .....	8
7.4 Storage and curing conditions.....	8
8 Procedure.....	8
9 Expression of results — Adhesive strength.....	8
10 Test report.....	10

## 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.*

**EN 1015-12:2016 (E)**

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<sup>2</sup>);

$F_u$  is the failure load, (N);

$A$  is the test area of cylindrical specimen, (mm<sup>2</sup>).

## 5 Apparatus

**5.1 Truncated conical rings**, (see Figure 1) made of stainless steel or brass, with internal diameter of  $(50 \pm 0,1)$  mm and  $(25 \pm 0,5)$  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  $(51 \pm 0,1)$  mm.

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

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
-