Irish Standard
I.S. EN 16784:2016

Timber Structures - Test methods - Determination of the long term behaviour of coated and uncoated dowel-type fasteners

I.S. EN 16784:2016

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN 16784:2016 is the adopted Irish version of the European Document EN 16784:2016, Timber Structures - Test methods - Determination of the long term behaviour of coated and uncoated dowel-type fasteners

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 16784

June 2016

ICS 91.080.20

English Version

Timber structures - Test methods - Determination of the long term behaviour of coated and uncoated dowel-type fasteners

Structures en bois - Méthodes d'essai - Détermination du comportement à long terme des éléments de fixation de type tige, revêtus ou non

Holzbauwerke - Prüfverfahren - Bestimmung des Langzeitverhaltens beschichteter und unbeschichteter stiftförmiger Verbindungsmittel

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 16784:2016) has been prepared by Technical Committee CEN/TC 124 "Timber Structures", the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by December 2016, and conflicting national standards shall be withdrawn at the latest by December 2016.

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1 Scope

This European Standard specifies a test method for the determination of the long duration withdrawal strength of coated and uncoated dowel-type fasteners in structural timber and timber products and wood based products for structural application.

The method applies to all types of nails, screws and staples.

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 1382, *Timber Structures — Test methods — Withdrawal capacity of timber fasteners*

EN 26891:1991, *Timber structures — Joints made with mechanical fasteners — General principles for the determination of strength and deformation characteristics (ISO 6891:1983)*

EN ISO 8970, *Timber structures — Testing of joints made with mechanical fasteners — Requirements for wood density (ISO 8970)*

ISO 13061-1, *Physical and mechanical properties of wood — Test methods for small clear wood specimens — Part 1: Determination of moisture content for physical and mechanical tests*

ISO 13061-2, *Physical and mechanical properties of wood — Test methods for small clear wood specimens — Part 2: Determination of density for physical and mechanical tests*

3 Terms and definitions

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

3.1
reference withdrawal strength
mean (50 % fractile) withdrawal strength of the tests carried out in accordance with EN 1382

3.2
load level
percentage of the reference withdrawal strength

4 Symbols and abbreviations

a staple crown width, in millimetres (see Figure 1)

d is the outer thread diameter for screws, the diameter of the smooth plain part of a round nail or for staples the diameter of the wire (transformed to a round cross-section) (see EN 14592)

F_{max} maximum withdrawal load, in newtons

$k_{d,T}$ duration of load factor for withdrawal load

l_p the effective depth of penetration of fastener, in millimetres. For smooth nails and staples this includes the point. For profiled nails and screws only the penetration depth of the profiled part. In the case of partly or completely resin coated fasteners only the depth of penetration of the coated