

Irish Standard I.S. EN 494:2012+A1:2015

Fibre-cement profiled sheets and fittings -Product specification and test methods

© CEN 2015 No copying without NSAI permission except as permitted by copyright law.

I.S. EN 494:2012+A1:2015

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:

Published:

EN 494:2012+A1:2015

2015-09-09

This document was published under the authority of the NSAI

ICS number:

and comes into effect on:

91.100.40

2015-09-28

NOTE: If blank see CEN/CENELEC cover page

Sales:

NSAI T +353 1 807 3800 1 Swift Square, F+353 1 807 3838

T+353 1 857 6730

Northwood, Santry

E standards@nsai.ie

F+353 1 857 6729

Dublin 9

W NSAl.ie

W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

This is a free page sample. Access the full version online.

National Foreword

I.S. EN 494:2012+A1:2015 is the adopted Irish version of the European Document EN 494:2012+A1:2015, Fibre-cement profiled sheets and fittings - Product specification and test methods

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 is a free page sample. Access the full version online.

This page is intentionally left blank

EUROPEAN STANDARD

EN 494:2012+A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2015

ICS 91.100.40

Supersedes EN 494:2012

English Version

Fibre-cement profiled sheets and fittings - Product specification and test methods

Plaques profilées en fibres-ciment et accessoires -Spécifications du produit et méthodes d'essai Faserzement-Wellplatten und dazugehörige Formteile - Produktspezifikation und Prüfverfahren

This European Standard was approved by CEN on 11 August 2012 and includes Amendment 1 approved by CEN on 6 June 2015.

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.......4 2 Normative references......5 Symbols and abbreviations7 4 Product requirements......8 5 5.1 General.......8 Composition8 5.1.1 5.1.2 Appearance and finish......8 Dimensions and tolerances9 5.2 General.......9 5.2.1 Categorisation by height of profile9 5.2.2 5.2.3 Thickness9 5.2.4 Physical requirements and characteristics for fibre-cement profiled sheets 11 5.3 5.3.1 General......11 5.3.2 5.3.3 5.3.4 5.4 5.4.1 5.4.2 5.4.3 5.4.4 5.4.5 Summary of characteristics and classification......13 5.5 5.5.1 5.5.2 5.6 5.6.1 5.6.2 5.6.3 5.7 6 6.1 6.2 6.2.1 6.2.2 6.2.3 6.3 6.3.1 6.3.2 6.3.3

6.3.4

6.3.5

6.3.6	Procedure for modifications	20
6.4	Inspection of a consignment of finished products	20
7	Test methods	21
7.1	General	
7.2	Dimensional tests	
7.2.1	Dimensional tests for sheets	21
7.2.2	Dimensional tests for fittings	24
7.3	Tests for physical performance and characteristics	
7.3.1	Apparent density	24
7.3.2	Mechanical characteristics	25
7.3.3	Water impermeability	28
7.3.4	Warm water	29
7.3.5	Soak-dry	30
7.4	Tests for climatic performance	31
7.4.1	Freeze-thaw	31
7.4.2	Heat-rain	33
7.4.3	Freeze-thaw test for fittings	34
7.5	Test for fire performance	34
7.5.1	Test for external fire performance	34
7.5.2	Test for reaction to fire	35
8	Marking, labelling and packaging	40
Annex	A (normative) Figures	41
Annex	B (normative) Consignment inspection sampling	53
Annex	C (normative) Statistical method for determining the corresponding wet values or	
· · · · · · · · · · · · · · · · · · ·	revised dry specifications for the breaking load and/or bending moment when	
	carrying out the dry method of test for quality control purposes	54
C.1	Procedure	
C.2	Determination of the correlation between the results of testing wet and dry	0 1
U. _	specimens	54
C.3	Determination of the regression line	
C.4	Determination of a value for wet testing from an obtained value for dry testing	
C.5	Determination of the minimum value specified for dry testing x _{std} corresponding to	
	the minimum value specified for wet testing in this document y_{std}	56
_		
Annex	ZA (informative) (A) Clauses of this European Standard addressing the provisions of the EU Construction Products Regulation (A)	5Ω
ZA.1	Scope and relevant characteristics	
ZA.2	Procedure for AVCP of fibre - cement profiled sheets and fittings	
	Systems of AVCP	
	Declaration of performance (DoP)	
ZA.3	CE marking and labelling	
Bibliog	graphy	71

European foreword

This document (EN 494:2012+A1:2015) has been prepared by Technical Committee CEN/TC 128 "Roof covering products for discontinuous laying and products for wall cladding", the secretariat of which is held by NBN.

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 March 2016, and conflicting national standards shall be withdrawn at the latest by June 2017.

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.

This document includes Amendment 1 approved by CEN on 6 June 2015.

This document supersedes (A) EN 494:2012 (A).

The start and finish of text introduced or altered by amendment is indicated in the text by tags [A] (A1).

h 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 the EU Construction Products Regulation 305/2011.

For relationship with the EU Regulation 305/2011, see informative Annex ZA, which is an integral part of this document. (41)

Men comparing EN 494:2004+A3:2007 and the previous edition EN 494:2012, the following paragraphs had been changed or added: 3.10, 3.11, 5.1.1, Table 2, 5.3.3.1, 5.3.3.4, 5.6.3, Table 6, 6.3.2, 7.4.2.1 and Annex ZA. $\boxed{A_1}$

A distinction has been made between product appraisal (type tests) and routine quality control requirements (acceptance tests).

The performance of a roof or another building part constructed with these products depends not only on the properties of the product as required by this document, but also on the design, construction and installation of the components as a whole in relation to the environment and conditions of use.

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

1 Scope

This European Standard specifies the technical requirements and establishes methods of control and test as well as acceptance conditions for fibre-cement profiled sheets and their fibre-cement fittings for one or more of the following uses:

- roofing;
- internal wall finishes;
- external wall and ceiling finishes.

For the purpose of this European Standard, fibre-cement profiled sheets are classified according to their height of corrugation and their mechanical characteristics.

This European Standard covers fibre-cement profiled sheets reinforced with fibres of different type as specified in 5.1.1, with and without factory applied coating.

This European Standard does not include calculations with regard to works, design requirements, installation techniques, wind uplift or rain proofing of the installed sheets.

NOTE Some of these requirements can be applied, after agreement, to curved sheets for specific applications.

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 197-1, Cement — Part 1: Composition, specifications and conformity criteria for common cements

CEN/TS 1187 Test methods for external fire exposure to roofs

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

EN 13501-5, Fire classification of construction products and building elements — Part 5: Classification using data from external fire exposure to roofs tests

EN 13823, Reaction to fire tests for building products — Building products excluding floorings exposed to the thermal attack by a single burning item

EN 15057, Fibre cement profiled sheets - Impact resistance test method

EN ISO 1716, Reaction to fire tests for products — Determination of the gross heat of combustion (calorific value) (ISO 1716)

ISO 2602, Statistical interpretation of test results — Estimation of the mean — Confidence interval

ISO 2859-1, Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection

ISO 3951-1, Sampling procedures for inspection by variables — Part 1: Specification for single sampling plans indexed by acceptance quality limit (AQL) for lot-by-lot inspection for a single quality characteristic and a single AQL



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

Product Page

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