BS EN 494:2012+A1:2015

BSI Standards Publication

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

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National foreword

This British Standard is the UK implementation of EN 494:2012+A1:2015. It supersedes BS EN 494:2012, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to CEN text carry the number of the CEN amendment. For example, text altered by CEN amendment A1 is indicated by ⟨A1⟩ ⟨A1⟩.

The UK participation in its preparation was entrusted by Technical Committee B/542, Roofing and cladding products for discontinuous laying, to Subcommittee B/542/4, Fibre reinforced cement sheeting for roofing.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

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

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Compliance with a British Standard cannot confer immunity from legal obligations.

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EUROPEAN STANDARD

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EUROPÄISCHE NORM

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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.

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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of an identical text or by endorsement, at the latest by March 2016, and conflicting national standards shall be withdrawn at the latest by June 2017.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 A1 EN 494:2012 A1.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

A1 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. A1

A1 When 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. A1

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*

3 Terms and definitions

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

3.1
profiled sheet
component the cross section of which consists of corrugations as in the examples shown in [A1] Figure A.1 [A1]

Note 1 to entry: The corrugations are defined by their pitch *a* and their height *h*.

3.2
acceptance test
test to establish whether a batch of sheets, drawn either from continuous production or from a consignment, conforms to a specification

Note 1 to entry: Test methods and specification limit values are specified in this document. Sampling levels and acceptance criteria are given in [A1] 6.2.2 [A1].

3.3
type test
test carried out to demonstrate conformity with the requirements of this document or for the approval of a new product and/or when a fundamental change is made in formulation and/or method of manufacture, the effects of which cannot be predicted on the basis of previous experience

Note 1 to entry: The test is performed on the as delivered product, but is not required for each production batch.

3.4
acceptable quality level *(AQL)*
quality level which in a sampling plan corresponds to a specified, relatively high probability of acceptance

Note 1 to entry: It is the maximum percent defective (or maximum number of defects per 100 units) that for purposes of sampling inspection can be considered satisfactory as a process average.

Note 2 to entry: A sampling scheme with an *AQL* of 4 % means that batches containing up to 4 % defective items have a high probability of acceptance.

3.5
as delivered
same condition as the producer intends to supply the product after completing all aspects of the process including maturing and, when appropriate, painting

3.6
short sheet
sheet having a length less than or equal to 0,9 m

3.7
long sheet
sheet having a length greater than 0,9 m