| STN | Vláknocementové dosky a tvarovky Špecifikácia výrobku a skúšobné metódy | STN EN 492+A2 |
|-----|--|------------------|
| | | 72 2660 |

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/18

Obsahuje: EN 492:2012+A2:2018

Oznámením tejto normy sa od 30.01.2020 ruší STN EN 492+A1 (72 2660) z januára 2017

EUROPEAN STANDARD NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 492:2012+A2

April 2018

ICS 91.100.40

Supersedes EN 492:2012+A1:2016

English Version

Fibre-cement slates and fittings - Product specification and test methods

Ardoises en fibres-ciment et leurs accessoires en fibres-ciment - Spécification du produit et méthodes d'essai

Faserzement-Dachplatten und dazugehörige Formteile
- Produktspezifikation und Prüfverfahren

This European Standard was approved by CEN on 24 November 2015 and includes Amendment 2 approved by CEN on 9 November 2017.

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, Serbia, 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: Rue de la Science 23, B-1040 Brussels

EN 492:2012+A2:2018 (E)

| Cont | ontents | |
|--------------------|---|----|
| European foreword4 | | |
| 1 | Scope | 5 |
| 2 | Normative references | |
| 3 | Terms and definitions | |
| | | |
| 4 | Symbols and abbreviations | |
| 5 | Product requirements | |
| 5.1 | General | |
| 5.1.1 | Composition | |
| 5.1.2 | Appearance and finish | |
| 5.2 | Dimensions and tolerance | |
| 5.2.1 | General | _ |
| 5.2.2 | Thicknesses | |
| 5.2.3 | Tolerances on nominal dimensions | |
| 5.3 | Physical requirements and characteristics for fibre-cement slates | 9 |
| 5.3.1 | General | 9 |
| 5.3.2 | Apparent density | 9 |
| 5.3.3 | Mechanical characteristics | 9 |
| 5.3.4 | Water impermeability | 9 |
| 5.4 | Durability requirements | |
| 5.4.1 | General | 10 |
| 5.4.2 | Freeze-thaw | 10 |
| 5.4.3 | Heat-rain | 10 |
| 5.4.4 | Warm water | 10 |
| 5.4.5 | Soak-dry | 10 |
| 5.5 | Fire and safety | 10 |
| 5.5.1 | External fire performance | 10 |
| 5.5.2 | Reaction to fire | 10 |
| 5.5.3 | Release of dangerous substances | 10 |
| 5.6 | Product information | |
| 6 | Assessment and verification of constancy of performance — AVCP | 11 |
| 6.1 | General | |
| 6.2 | Type testing | |
| 6.2.1 | General | |
| 6.2.2 | Test samples, testing and compliance criteria | |
| 6.2.3 | Test reports | |
| 6.3 | Factory production control (FPC) | |
| 6.3.1 | General | |
| 6.3.2 | Requirements | |
| 6.3.3 | Product specific requirements | |
| 6.3.4 | Initial inspection of factory and of FPC | |
| 6.3.5 | Continuous surveillance of FPC | |
| 6.3.6 | Procedure for modifications | |
| 6.4 | Inspection of a consignment of finished products | |

| 7 | Test methods | 17 |
|------------|--|----|
| 7.1 | General | 17 |
| 7.2 | Dimensional tests | 17 |
| 7.2.1 | Preparation of specimen | 17 |
| 7.2.2 | Apparatus | 18 |
| 7.2.3 | Procedure | 18 |
| 7.2.4 | Expression and interpretation of results | 18 |
| 7.3 | Tests for physical performance and characteristics | 18 |
| 7.3.1 | Apparent density | |
| 7.3.2 | Mechanical characteristics: Breaking load test | 19 |
| 7.3.3 | Water impermeability | |
| 7.3.4 | Warm water | 22 |
| 7.3.5 | Soak-dry | 22 |
| 7.4 | Tests for climatic performance | 24 |
| 7.4.1 | Freeze-thaw | 24 |
| 7.4.2 | Heat-rain | 25 |
| 7.5 | Test for fire performance | 26 |
| 7.5.1 | Test for external fire performance | 26 |
| 7.5.2 | Test for reaction to fire | 27 |
| 8 | Marking, labelling and packaging | 34 |
| Annex | A (normative) Consignment inspection sampling | 35 |
| Annex | B (normative) Statistical method for determining the corresponding wet values or revised dry specifications for the bending moment when carrying out the dry method of test for quality control purposes | 36 |
| B.1 | Procedure | |
| B.2 | Determination of the correlation between the results of testing wet and dry specimens | |
| B.3 | Determination of the regression line | |
| B.4 | Determination of a value for wet testing from an obtained value for dry testing | |
| B.5 | Determination of the minimum value specified for dry testing x_{std} corresponding to | |
| | the minimum value specified for wet testing in this standard y_{std} | 38 |
| Anney | C (informative) Examples | 40 |
| | Examples of dimension h | |
| C.2 | Examples of fibre-cement slates installed showing lines of fixing | |
| | | 12 |
| Annex | D (normative) Requirements of Decision 2001/671/EC regarding the external fire performance of roof coverings expressed following the classes defined in EN 13501- | 40 |
| | 5 | 43 |
| Annex | ZA (informative) $\[\mathbb{A} \]$ Relationship of this European Standard with Regulation [EU] No. $305/2011$ | 45 |
| ZA.1 | Scope and relevant characteristics | |
| ZA.2 | System of Assessment and Verification of Constancy of Performance [AVCP] | |
| ZA.3 | Assignment of AVCP tasks | |
| | <u> </u> | |
| RIDIIO | graphy | 49 |

European foreword

This document (EN 492:2012+A2:2018) 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 October 2018, and conflicting national standards shall be withdrawn at the latest by January 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document includes Amendment 1, approved by CEN on 24 November 2015 and Amendment 2, approved by CEN on 9 November 2017.

This document supersedes \triangle EN 492:2012+A1:2016 \triangle .

The start and finish of text introduced or altered by amendment is indicated in the text by tags $\boxed{\mathbb{A}_2}$ $\boxed{\mathbb{A}_2}$.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

For relationship with \triangle EU Regulation No 305/2011 \triangle 1, see informative Annex ZA, which is an integral part of this document.

A) In comparison with EN 492:2004, the following sections in EN 492:2012 had been changed or added: (A) Clause 2, 3.6, 3.7, 5.1.1, 5.3.3, 5.5.3, 6.3.2, 6.4, 7.3.4.4, 7.3.5.4, 7.5.1.2, 7.5.2.2, Annex A, Annex D.

Annex ZB concerning the EC Directive 76/769/EEC [A1] had been deleted (A1].

A distinction had been made had 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 standard, 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, Serbia, 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 slates and their fibre-cement fittings for one or more of the following uses:

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

This European Standard applies to fibre-cement slates with a height dimension h (see Clause 4) not exceeding 850 mm for overlapping assembly. For the purpose of this European Standard, fibre-cement slates have been classified according to their bending moment.

This European Standard covers fibre-cement slates reinforced with fibres of different types as specified in 5.1.1.

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

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 1187:2012, 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 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

koniec náhľadu – text ďalej pokračuje v platenej verzii STN