DIN EN 492:2018-07 (E)

Fibre-cement slates and fittings - Product specification and test methods (includes Amendment :2018)

Contents

Page

European foreword 4

1 Scope 5

2 Normative references 5

3 Terms and definitions 6

4 Symbols and abbreviations 7

5 Product requirements 8
5.1 General 8
5.1.1 Composition 8
5.1.2 Appearance and finish 8
5.2 Dimensions and tolerance 8
5.2.1 General 8
5.2.2 Thicknesses 8
5.2.3 Tolerances on nominal dimensions 9
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 10
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 11

6 !Assessment and verification of constancy of performance -- AVCP 11
6.1 General 11
6.2 Type testing 11
6.2.1 General 11
6.2.2 Test samples, testing and compliance criteria 12
6.2.3 Test reports 12
6.3 Factory production control (FPC) 12
6.3.1 General 12
6.3.2 Requirements 13
6.3.3 Product specific requirements 16
6.3.4 Initial inspection of factory and of FPC 16
6.3.5 Continuous surveillance of FPC 17
6.3.6 Procedure for modifications 17
6.4 Inspection of a consignment of finished products 17

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 ... 18
7.3.2 Mechanical characteristics: Breaking load test ... 19
7.3.3 Water impermeability ... 21
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 ... 36
B.2 Determination of the correlation between the results of testing wet and dry specimens ... 36
B.3 Determination of the regression line ... 37
B.4 Determination of a value for wet testing from an obtained value for dry testing ... 37
B.5 Determination of the minimum value specified for dry testing xstd corresponding to the minimum value specified for wet testing in this standard ystd ... 38

Annex C (informative) Examples ... 40

C.1 Examples of dimension h ... 40
C.2 Examples of fibre-cement slates installed showing lines of fixing ... 42

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- 5 ... 43

Annex ZA (informative) #Relationship of this European Standard with Regulation [EU] No. 305/2011 ... 45

ZA.1 Scope and relevant characteristics ... 45

ZA.2 System of Assessment and Verification of Constancy of Performance [AVCP] ... 46

ZA.3 Assignment of AVCP tasks ... 46

Bibliography ... 49