

DIN EN 12467:2016-12 (E)

Fibre-cement flat sheets - Product specification and test methods (includes Amendment :2016)

Contents		Page
European foreword		5
1	Scope	6
2	Normative references	6
3	Terms and definitions	6
4	Symbols and abbreviations	8
5	Requirements	9
5.1	General	9
5.1.1	Composition	9
5.1.2	Appearance and finish	9
5.2	Classification	9
5.2.1	General	9
5.2.2	Category A	9
5.2.3	Category B	10
5.2.4	Category C	10
5.2.5	Category D	10
5.2.6	Groups of sizes	10
5.3	Dimensions and tolerances	10
5.3.1	General	10
5.3.2	Nominal length and width	10
5.3.3	Thickness	10
5.3.4	Tolerances on nominal dimensions	11
5.3.5	Tolerances on shape	12
5.4	Physical requirements and characteristics	12
5.4.1	General	12
5.4.2	Apparent density	12
5.4.3	Moisture movement	12
5.4.4	Mechanical characteristics - Bending strength (MOR) - Modulus of elasticity (MOE)	13
5.4.5	Water impermeability for Categories A, B and D	13
5.4.6	Water vapour permeability for Category D	13
5.5	Durability requirements	14
5.5.1	General	14
5.5.2	Freeze-thaw for Categories A, B and D	14
5.5.3	Heat-rain for Categories A and B	14
5.5.4	Warm water for Categories A, B, C and D	14
5.5.5	Soak-dry for Categories A, B, C and D	14
5.6	Fire and safety	14
5.6.1	Reaction to fire	14
5.6.2	Release of dangerous substances	14
5.7	Product information	15
6	Assessment and verification of constancy of performance -- AVCP	15
6.1	General	15
6.2	Type testing	15
6.2.1	General	15
6.2.2	Test samples, testing and compliance criteria	17
6.2.3	Test reports	17

6.3	Factory production control (FPC)	17
6.3.1	General	17
6.3.2	Requirements	17
6.3.3	Product specific requirements	20
6.3.4	Initial inspection of factory and of FPC	20
6.3.5	Continuous surveillance of FPC	21
6.3.6	Procedure for modifications	21
6.4	Inspection of a consignment of finished products"	21
7	Test methods	21
7.1	General	21
7.2	Dimensional and geometrical tests	21
7.2.1	Preparation of specimen	21
7.2.2	Apparatus	22
7.2.3	Procedure	22
7.2.4	Expression and interpretation of results	24
7.3	Tests for physical performance and characteristics	25
7.3.1	Apparent density	25
7.3.2	Mechanical characteristics - Bending strength - Modulus of elasticity (Bending modulus)	25
7.3.3	Water impermeability	30
7.3.4	Water vapour permeability	31
7.3.5	Warm water	31
7.3.6	Soak-dry	32
7.3.7	Moisture movement test	33
7.4	Tests for climatic performance	33
7.4.1	Freeze-thaw	33
7.4.2	Heat-rain	35
7.5	Test for reaction to fire performance	36
7.5.1	Sheets satisfying the requirements for the fire reaction Class A1 without the need for testing	36
7.5.2	Other sheets	36
8	Marking, labelling and packaging	44
Annex A (normative) Consignment inspection sampling		45
Annex B (normative) Statistical method for determining the corresponding wet values or revised dry specifications for the MOR when carrying out the dry method of test or when tested prior to coating for quality control purposes		46
B.1	Procedure	46
B.2	Determination of the correlation between the results of testing wet and dry specimens ...	46
B.3	Determination of the regression line	47
B.4	Determination of a value for wet testing from an obtained value for dry testing	47
B.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}	48
Annex C (normative) Test method for the determination of moisture movement characteristic of fibre-cement sheets		49
C.1	General	49
C.2	Principle	49
C.3	Apparatus	49
C.4	Specimen preparation	49
C.5	Test procedure	49
C.6	Calculation of results	50
C.7	Test report	50
Annex ZA (informative) !Clauses of this European Standard addressing the provisions of the EU Construction Products Regulation		51

ZA.1 Scope and relevant characteristics	51
ZA.2 Procedure for AVCP of fibre cement flat sheets	52
ZA.2.1 Systems of AVCP	52
ZA.2.2 Declaration of performance (DoP)	56
ZA.3 CE marking and labelling"	60
Bibliography	63