DIN EN 12859:2011-05 (E)

Gypsum blocks - Definitions, requirements and test methods

Contents

Page

Foreword 4

Introduction 5

1 Scope 6

2 Normative references 6

3 Terms, definitions and symbols 7
3.1 Terms and definitions 7
3.2 Symbols 9

4 Requirements 10
4.1 Fire behaviour 10
4.1.1 Reaction to fire 10
4.1.2 Fire resistance 10
4.2 Direct airborne sound insulation 10
4.3 Thermal properties 10
4.3.1 Thermal resistance 10
4.3.2 Thermal conductivity 10
4.4 Types of gypsum blocks 11
4.4.1 General 11
4.4.2 Visual identification of gypsum blocks by pigmentation 11
4.5 Release of dangerous substances 12
4.6 Dimensions and tolerances 12
4.6.1 Dimensions 12
4.6.2 Tolerances 12
4.7 Flatness of gypsum blocks 13
4.8 Dry density and tolerance 13
4.8.1 Classes of density 13
4.8.2 Tolerance 13
4.9 Surface mass of gypsum blocks and tolerance 13
4.10 Bending strength 13
4.11 Moisture content 14
4.12 pH 15
4.13 Water absorption capacity 15
4.13.1 Classification 15
4.13.2 Requirement 15
4.14 Surface hardness 15

5 Test methods 15
5.1 Sampling 15
5.2 Preparation of test pieces 15
5.3 Measurement of dimensions 16
5.3.1 Thickness 16
5.3.2 Length 16
5.3.3 Height 18
5.3.4 Cavity gypsum blocks 18
5.4 Flatness of gypsum blocks 19
5.4.1 Principle 19
5.4.2 Apparatus 19
5.4.3 Procedure 19

5.4.4 Expression of results ... 19
5.5 Mass of gypsum blocks ... 19
5.5.1 Principle ... 19
5.5.2 Apparatus ... 19
5.5.3 Procedure ... 19
5.5.4 Expression of results ... 19
5.6 Density of gypsum blocks ... 19
5.6.1 Principle ... 19
5.6.2 Apparatus ... 19
5.6.3 Procedure ... 20
5.6.4 Expression of results ... 20
5.7 Bending strength ... 20
5.7.1 Principle ... 20
5.7.2 Apparatus ... 20
5.7.3 Procedure ... 21
5.7.4 Expression of results ... 21
5.8 Moisture content ... 21
5.8.1 Principle ... 21
5.8.2 Expression of results ... 21
5.9 Water absorption capacity (hydrophobic gypsum blocks only) ... 22
5.9.1 Principle ... 22
5.9.2 Apparatus ... 22
5.9.3 Preparation of the test pieces ... 22
5.9.4 Procedure ... 22
5.9.5 Expression of results ... 22
5.10 pH measurement ... 22
5.10.1 Principle ... 22
5.10.2 Apparatus ... 22
5.10.3 Sampling ... 23
5.10.4 Procedure ... 23
5.10.5 Expression of results ... 23
5.11 Test reports ... 23

6 Evaluation of conformity ... 23
6.1 General ... 23
6.2 Initial type testing ... 23
6.3 Factory production control ... 24

7 Designation of gypsum blocks ... 24

8 Marking, labelling and packaging ... 25

Annex A (normative) Sampling for independent acceptance testing carried out by a third party ... 26

A.1 General ... 26
A.2 Sampling procedure ... 26

Annex B (informative) Surface hardness ... 28

B.1 General ... 28
B.2 Requirements ... 28
B.3 Test method ... 28

Annex ZA (informative) Clauses of this European Standard addressing the provisions of the EU Construction Products Directive ... 30

ZA.1 Scope and relevant characteristics ... 30

ZA.2 Procedure for attestation of conformity of gypsum blocks ... 31

ZA.3 CE Marking and labelling ... 32

Bibliography ... 35