DIN EN 15304:2010-06 (E)

Determination of the freeze-thaw resistance of autoclaved aerated concrete

Contents

Page

Foreword 3

1 Scope 4

2 Normative references 4

3 Definitions, symbols and abbreviations 4
3.1 Superscripts and subscripts 4
3.2 Symbols 4
3.2.1 Symbols used in the main body of the standard 4
3.2.2 Symbols specific to Annex A 5

4 Principle 6

5 Apparatus 6

6 Test specimens 6
6.1 Sample 6
6.2 Shape and size of the test specimens 7
6.3 Number of test specimens 7
6.4 Preparation of test specimens 7
6.5 Measurement of test specimens and determination of their volume 8
6.6 Conditioning of test specimens 8

7 Testing procedure 8
7.1 Freeze-thaw test 8
7.2 Determination of actual moisture content and dry density of AAC 9

8 Test results 9
8.1 Calculation of dry density 9
8.2 Calculation of moisture content 10
8.3 Calculation of mass loss 10

9 Test report 11

Annex A (informative) Determination of the loss in compressive strength in addition to the loss in mass 13

A.1 General 13
A.2 Test specimens 13
A.2.1 Number of test specimens 13
A.2.2 Preparation of test specimens 13
A.3 Testing procedure 13
A.3.1 Freeze-thaw tests 13
A.3.2 Conditioning of the test specimens for compression test after the freeze-thaw cycles 13
A.3.3 Compression test 14
A.4 Test results 14
A.4.1 Calculation of loss of compressive strength of main test specimens 14
A.4.2 Determination of mass loss 15
A.4.3 Calculation of dry density 16
A.4.4 Calculation of moisture content 16

Annex B (informative) Flow chart of freeze-thaw test 17

Bibliography 19

Figures Figure 1 - Cutting scheme 8

Figure B.1- Cutting scheme 17