DIN EN 12350-7:2022-05 (E)

Testing fresh concrete - Part 7: Air content - Pressure methods (includes Corrigendum:2022)

Contents

Page

European foreword ... 4

1 Scope ... 7

2 Normative references ... 7

3 Terms and definitions ... 7

4 Principles ... 7
4.1 General ... 7
4.2 Water column method ... 7
4.3 Pressure gauge method ... 8

5 Water column method ... 8
5.1 Common apparatus for fresh concrete testing ... 8
5.2 Procedure ... 10
5.2.1 Sampling ... 10
5.2.2 Filling the air test container and compacting the concrete ... 10
5.2.3 Mechanical vibration ... 10
5.2.4 Compacting by hand with compacting rod or bar ... 11
5.2.5 Measuring air content ... 11

6 Pressure gauge method ... 11
6.1 Common apparatus for fresh concrete testing ... 11
6.1.1 Pressure gauge meter ... 11
6.2 Procedure ... 13
6.2.1 Sampling ... 13
6.2.2 Filling the air test container and compacting the concrete ... 13
6.2.3 Mechanical vibration ... 14
6.2.4 Compacting by hand with compacting rod or bar ... 14
6.2.5 Measuring air content ... 14

7 Calculation and expression of results ... 14

8 Test report ... 15

9 Precision ... 15
9.1 Water column method ... 15
9.2 Pressure gauge method ... 16

Annex A (normative) Aggregate correction factor – water column method ... 17

A.1 General ... 17

A.2 Aggregate sample size ... 17

A.3 Filling the air test container ... 17

A.4 Determination of aggregate correction factor ... 18

Annex B (normative) Aggregate correction factor – pressure gauge method ... 19

B.1 General ... 19

B.2 Aggregate sample size ... 19

B.3 Filling the air test container ... 19

B.4 Determination of aggregate correction factor **20**
Annex C (normative) **Calibration of apparatus – water column method** **21**
C.1 General **21**
C.2 Apparatus **21**
C.3 Capacity of the calibration cylinder **21**
C.4 Capacity of the air test container **21**
C.5 Pressure expansion constant, e **22**
C.6 Calibration constant, *K* **22**
C.7 Required operating pressure **22**
C.8 Alternative operating pressure **23**
Annex D (normative) **Calibration of apparatus – pressure gauge method** **24**
D.1 General **24**
D.2 Apparatus **24**
D.3 Checking the capacity of the air test container **24**
D.4 Checking air content graduations on the pressure gauge **24**
Bibliography **26**