STN	Skúšanie čerstvého betónu Časť 7: Obsah vzduchu Tlakové metódy	STN EN 12350-7
		73 1312

Testing fresh concrete - Part 7: Air content - Pressure methods

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 12/19

Obsahuje: EN 12350-7:2019

Oznámením tejto normy sa ruší STN EN 12350-7 (73 1312) z júna 2011

STN EN 12350-7: 2020

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN 12350-7

June 2019

ICS 91.100.30

Supersedes EN 12350-7:2009

English Version

Testing fresh concrete - Part 7: Air content - Pressure methods

Essais pour béton frais - Partie 7 : Teneur en air - Méthode de la compressibilité

Prüfung von Frischbeton - Teil 7: Luftgehalt - Druckverfahren

This European Standard was approved by CEN on 29 April 2019.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Con	Curopean foreword		
Europ			
1	Scope	6	
2	Normative references	6	
3	Terms and definitions	6	
4	Principles	6	
4.1	General		
4.2	Water column method		
4.3	Pressure gauge method	7	
5	Water column method	7	
5.1	Common apparatus for fresh concrete testing		
5.2	Procedure		
5.2.1 5.2.2	Sampling		
5.2.2 5.2.3	Filling the air test container and compacting the concrete		
5.2.4	Compacting by hand with compacting rod or bar		
5.2.5	Measuring air content		
6	Pressure gauge method		
6.1	Common apparatus for fresh concrete testing		
6.1.1	Pressure gauge meter		
6.2	Procedure		
6.2.1	Sampling		
6.2.2	Filling the air test container and compacting the concrete		
6.2.3	Mechanical vibration		
6.2.4 6.2.5	Compacting by hand with compacting rod or bar Measuring air content		
	5		
7	Calculation and expression of results		
8	Test report	14	
9	Precision		
9.1	Water column method		
9.2	Pressure gauge method		
	x A (normative) Aggregate correction factor - water column method		
A.1	General		
A.2	Aggregate sample size	16	
A.3	Filling the air test container		
A.4	Determination of aggregate correction factor	17	
Anne	x B (normative) Aggregate correction factor - pressure gauge method	18	
B.1	General	18	
B.2	Aggregate sample size	18	
B.3	Filling the air test container	18	

B.4	Determination of aggregate correction factor	19
Anne	ex C (normative) Calibration of apparatus - water column method	20
C.1	General	20
C.2	Apparatus	20
C.3	Capacity of the calibration cylinder	
C.4	Capacity of the air test container	20
C.5	Pressure expansion constant, e	21
C.6	Calibration constant, K	21
C.7	Required operating pressure	21
C.8	Alternative operating pressure	22
Anne	ex D (normative) Calibration of apparatus - pressure gauge method	23
D.1	General	
D.2	Apparatus	23
D.3	Checking the capacity of the air test container	23
D.4	Checking air content graduations on the pressure gauge	23
Bibli	iography	25

European foreword

This document (EN 12350-7:2019) has been prepared by Technical Committee CEN/TC 104 "Concrete and related products", the secretariat of which is held by SN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2019, and conflicting national standards shall be withdrawn at the latest by December 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 12350-7:2009.

The results of a laboratory inter-comparison, in part funded by the EC under Measurement and Testing Programme, Contract MAT1-CT-94-0043 which investigated these two methods of measuring air content, did not find significant difference between them. However, it was found in this programme that the use of an internal vibrator to compact specimens of air entrained fresh concrete should only be done with caution, if loss of entrained air is to be avoided.

The determination of the aggregate correction value for the two methods has been included in normative Annexes A and B.

The method of calibrating the two types of apparatus has been included in normative Annexes C and D.

This standard is one of a series on testing concrete.

EN 12350, *Testing fresh concrete*, consists of the following parts:

- Part 1: Sampling and common apparatus
- Part 2: Slump test
- Part 3: Vebe test
- Part 4: Degree of compactability
- Part 5: Flow table test
- Part 6: Density
- Part 7: Air content Pressure methods
- Part 8: Self-compacting concrete Slump-flow test
- Part 9: Self-compacting concrete V-funnel test
- Part 10: Self-compacting concrete L-box test
- Part 11: Self-compacting concrete Sieve segregation test
- Part 12: Self-compacting concrete J-ring test

EN 12350-7:2019 (E)

The following amendments have been made to the 2009 edition of this standard:

- a) editorial revisions;
- b) reference to common apparatus and specification given in EN 12350-1.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This document describes two methods for determination of air content of compacted fresh concrete, made with normal weight or relatively dense aggregate and having a declared value of D of the coarsest fraction of aggregates actually used in the concrete (D_{max}) not greater than 63 mm.

The test is not suitable for concretes with slumps less than 10 mm according to EN 12350-2.

Neither method is applicable to concretes made with lightweight aggregates, air cooled blast-furnace slag, or aggregates with high porosity, because of the magnitude of the aggregate correction factor, compared with the entrained air content of the concrete.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12350-1, Testing fresh concrete — Part 1: Sampling and common apparatus

EN 12350-2, Testing fresh concrete — Part 2: Slump test

EN 12350-6, Testing fresh concrete — Part 6: Density

koniec náhľadu – text ďalej pokračuje v platenej verzii STN