



SLOVENSKI STANDARD

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SIST EN 12350-5:2009

Preskušanje svežega betona - 5. del: Preskus z razlezom

Testing fresh concrete - Part 5: Flow table test

Prüfung von Frischbeton - Teil 5: Ausbreitmaß

Essais pour béton frais - Partie 5 : Essai d'étalement à la table à choc

Ta slovenski standard je istoveten z: EN 12350-5:2019

ICS:

91.100.30	Beton in betonski izdelki	Concrete and concrete products
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SIST EN 12350-5:2019

en,fr,de

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EUROPEAN STANDARD

EN 12350-5

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2019

ICS 91.100.30

Supersedes EN 12350-5:2009

English Version

Testing fresh concrete - Part 5: Flow table test

Essais pour béton frais - Partie 5 : Essai d'étalement à
la table à choc

Prüfung von Frischbeton - Teil 5: Ausbreitmaß

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.

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

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European foreword

This document (EN 12350-5:2019) 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of an identical text or by endorsement, at the latest by December 2019, and conflicting national standards shall be withdrawn at the latest by December 2019.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 12350-5:2009.

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*

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;
- c) reference to flow retention testing;
- d) option to include specified flow class or flow target value in the report.

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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.

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1 Scope

This document specifies a method for determining the flow of fresh concrete. It is not applicable to self-compacting concrete, foamed concrete, no-fines concrete, or for concrete having a declared value of D of the coarsest fraction of aggregates actually used in the concrete (D_{\max}) of greater than 63 mm.

The flow test is sensitive to changes in the consistence of concrete, which correspond to flow values between 340 mm and 620 mm. Beyond these extremes the flow table test may be unsuitable and other methods of determining the consistence should be considered.

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*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Principle

This test determines the consistence of fresh concrete by measuring the spread of concrete on a flat plate which is subjected to jolting.

5 Apparatus

5.1 Common apparatus for fresh concrete testing

The apparatus listed below for the execution of this test method shall be in accordance with the specification given EN 12350-1 and as specified below.

5.1.1 Flow table (see Figure 1) consisting of: a moving table made from a flat plate with a plane area of (700 ± 2) mm \times (700 ± 2) mm, on which concrete can be placed, hinged to a rigid base onto which it can fall from a fixed height.

The flow table top shall have a flat metal surface with a minimum thickness of 2 mm. The metal surface shall not be readily attacked by cement paste or be liable to rusting. The flow table top shall have a mass of $(16 \pm 0,5)$ kg and may be detachable using a pin-hinge to allow weighing. The construction of the plate shall be such as to prevent distortion of the upper surface. The table top shall be hinged to the base in such a way that no aggregate can become trapped between the hinged surfaces.

The centre of the table shall be scribed with a cross, the lines of which run parallel to the edges of the plate and with a central circle (210 ± 1) mm in diameter.

At the front corners of the plate two hard and rigid blocks shall be firmly attached to the underside. They should not deform when wet and be non-absorbent. These stops shall transfer the load of the table top to the base without distorting the table. The base frame shall be constructed so that this load is

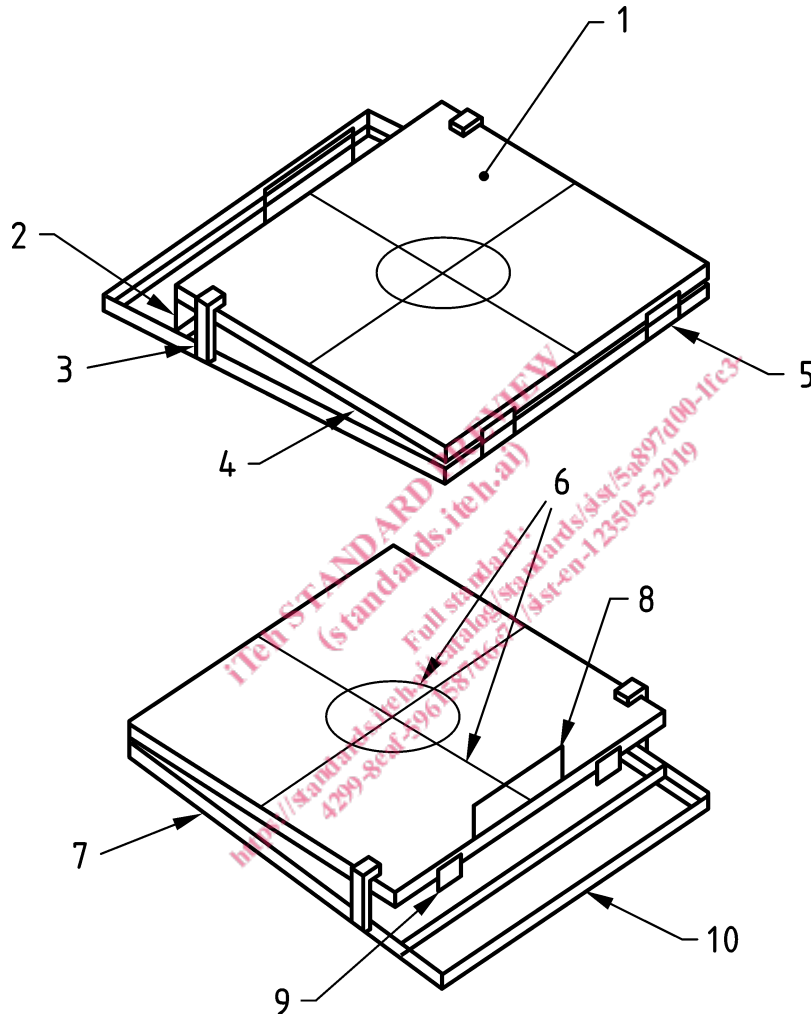
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transferred directly to the surface on which the apparatus is placed. This minimizes the tendency for the table top to bounce when allowed to fall freely.

Foot rests shall be provided to assist in stabilizing the table in use.

The fall height of the table top measured at the centre line of the front edge of the top plate shall be limited to (40 ± 1) mm by means of one or more stops.

For lifting the table top, a handle or lifting mechanism shall be provided to ensure that the top is lifted without jerking and allowed to fall freely over the entire lifting height.



Key

1 metal plate	6 markings
2 fall limited to (40 ± 1) mm	7 base frame
3 upper stop	8 lifting handle
4 table top	9 lower stop
5 external hinges	10 foot rests

Figure 1 — Typical flow table

5.1.2 Hollow Cone, having the same specification as the hollow cone specified in EN 12350-1 but having the following internal dimensions:

— diameter of base: (200 ± 2) mm;

- diameter of top: (130 ± 2) mm;
- height: (200 ± 2) mm.

See Figure 2.

NOTE Magnets can be used to assist in positioning the cone.

Dimensions in millimetres

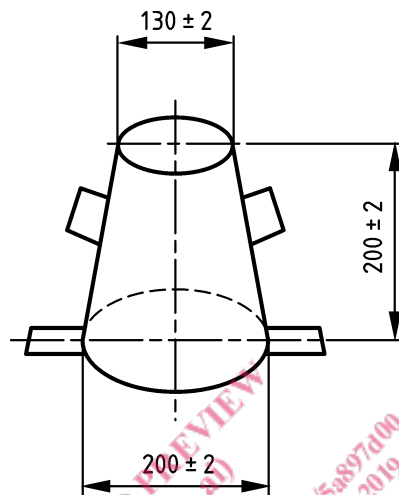


Figure 2 — Hollow cone

5.1.3 Tamping bar, made of hard material, having a square section of side (40 ± 1) mm and a length of approximately 200 mm. A further 120 mm to 150 mm may be turned to a circular section to form a handle to the bar (see Figure 3).

Dimensions in millimetres

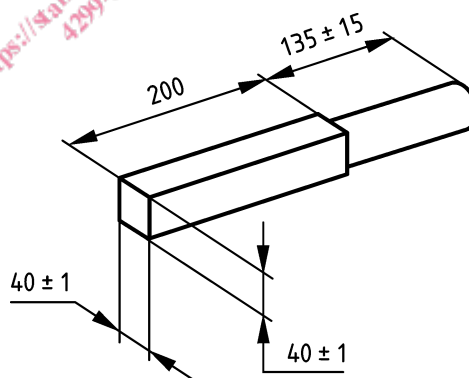


Figure 3 — Tamping bar

5.1.4 Measuring tape.

5.1.5 Remixing container or tray.

5.1.6 Shovel.

5.1.7 Moist cloth.