

Tests for mechanical and physical properties of aggregates - Part 10: Determination of water suction height

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1097-10:2003 sisaldab Euroopa standardi EN 1097-10:2002 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.02.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1097-10:2003 consists of the English text of the European standard EN 1097-10:2002.</p> <p>This document is endorsed on 18.02.2003 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This European Standard specifies a procedure for determining the water suction height of an aggregate in direct contact with a free water surface</p>	<p>Scope: This European Standard specifies a procedure for determining the water suction height of an aggregate in direct contact with a free water surface</p>
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ICS 91.100.15

Võtmesõnad: aggregates, definition, definitions, grain sizing, hygroscopic, mechanical properties, mineral aggregates, physical properties, rocks, samples, suction head, testing, water absorption capacity

ICS 91.100.15

English version

**Tests for mechanical and physical properties of aggregates -
Part 10: Determination of water suction height**

Essais pour déterminer les caractéristiques mécaniques et
physiques des granulats - Partie 10: Hauteur de succion
d'eau

Prüfverfahren für mechanische und physikalische
Eigenschaften von Gesteinskörnungen - Teil 10:
Bestimmung der Wassersaughöhe

This European Standard was approved by CEN on 7 November 2002.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This document (EN 1097-10:2002) has been prepared by Technical Committee CEN/TC 154 "Aggregates", the secretariat of which is held by BSI.

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 June 2003, and conflicting national standards shall be withdrawn at the latest by June 2004.

This standard forms part of a series of tests for mechanical and physical properties of aggregates. Test methods for other properties of aggregates will be covered by Parts of the following European Standards:

- EN 932 Tests for general properties of aggregates
- EN 933 Tests for geometrical properties of aggregates
- EN 1367 Tests for thermal and weathering properties of aggregates
- EN 1744 Tests for chemical properties of aggregates
- EN 13179 Tests for filler aggregate used in bituminous mixtures

The other parts of EN 1097 are:

- Part 1: Determination of the resistance to wear (micro-Deval)
- Part 2: Methods for the determination of resistance to fragmentation
- Part 3: Determination of loose bulk density and voids
- Part 4: Determination of the voids of dry compacted filler
- Part 5: Determination of the water content by drying in a ventilated oven
- Part 6: Determination of particle density and water absorption
- Part 7: Determination of the particle density of filler - Pyknometer method
- Part 8: Determination of the polished stone value
- Part 9: Determination of the resistance to wear by abrasion from studded tyres - Nordic test

This standard includes a Bibliography.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies a procedure for determining the water suction height of an aggregate in direct contact with a free water surface.

NOTE Rise of moisture through an aggregate layer under the ground floor may cause moisture problems in the building. If the layer is thicker than the water suction height of the aggregate used, the layer is considered as a water breaking layer.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies (including amendments).

EN 932-2 *Tests for general properties of aggregates — Part 2: Methods for reducing laboratory samples.*

EN 932-5 *Tests for general properties of aggregates — Part 5: Common equipment and calibration.*

EN 1097-5 *Tests for mechanical and physical properties of aggregates — Part 5: Determination of the water content by drying in a ventilated oven.*

3 Terms and definitions

For the purposes of this European Standard, the following terms and definitions apply.

3.1

water suction height

level to which the water is raised by an aggregate in direct contact with a free water surface

3.2

hygroscopic water absorbing capacity

moisture content of aggregates in a sealed container at 97 % relative humidity

3.3

aggregate size

designation of aggregate in terms of lower (d) and upper (D) sieve sizes

NOTE This designation accepts the presence of some particles which will be retained on the upper sieve (oversize) and some which will pass the lower sieve (undersize).

3.4

constant mass

successive weighings after drying at least 1 h apart not differing by more than 0,1 %

NOTE In many cases constant mass can be achieved after a test portion has been dried for a pre-determined period in a specified oven at $(110 \pm 5) ^\circ\text{C}$. Test laboratories can determine the time required to achieve constant mass for specific types and sizes of sample dependent upon the drying capacity of the oven used.