

Täitematerjalide soojuslike omaduste ja ilmastikukindluse katsetamine. Osa 1: Külmakindluse määramine

Tests for thermal and weathering properties of
aggregates. Part 1: Determination of resistance to
freezing and thawing

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1367-1:2007 sisaldab Euroopa standardi EN 1367-1:2007 ingliskeelset teksti. Käesolev dokument on jõustatud 31.05.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 1367-1:2007 consists of the English text of the European standard EN 1367-1:2007. This document is endorsed on 31.05.2007 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.
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Käsitlusala: Käesolev standard määratleb meetodi täitematerjali vastupidavuse hindamiseks külmutamise ja sulatamise tsüklilisele toimele. Märkus. Külmutamisel tekkivate pingete väärtus täitematerjalides sõltub kõikide muude faktorite kõrval ka nende veega küllastatuse astmest ning külmutamistemperatuurist. Tulemused on aluseks täitematerjali ilmastikukindluse hindamisel. Katse on sobiv täitematerjalidele terasuurusega 4 mm kuni 63 mm.	Scope: This European Standard specifies a test method which provides information on how an aggregate behaves when it is subjected to the cyclic action of freezing and thawing.
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ICS 91.100.30

Võtmesõnad: katsed, katseproovide ettevalmistamine, proovid, täitematerjalid, vähendamise meetodid

English Version

**Tests for thermal and weathering properties of aggregates - Part
1: Determination of resistance to freezing and thawing**

Essais de détermination des propriétés thermiques et de
l'altérabilité des granulats - Partie 1: Détermination de la
résistance au gel-dégel

Prüfverfahren für thermische Eigenschaften und
Verwitterungsbeständigkeit von Gesteinskörnungen - Teil 1:
Bestimmung des Widerstands gegen Frost-Tau-Wechsel

This European Standard was approved by CEN on 12 February 2007.

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 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 Management Centre has the same status as the official versions.

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



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Foreword

This document (EN 1367-1:2007) 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 September 2007, and conflicting national standards shall be withdrawn at the latest by September 2007.

This document supersedes EN 1367-1:1999.

This European Standard is one of a series of tests for thermal and weathering properties of aggregates as listed below:

EN 1367-2, *Tests for thermal and weathering properties of aggregates — Part 2: Magnesium sulfate test*

EN 1367-3, *Tests for thermal and weathering properties of aggregates — Part 3: Boiling test for "Sonnenbrand basalt"*

EN 1367-4, *Tests for thermal and weathering properties of aggregates — Part 4: Determination of drying shrinkage*

EN 1367-5, *Tests for thermal and weathering properties of aggregates — Part 5: Determination of resistance to thermal shock*

prEN 1367-6, *Tests for thermal and weathering properties of aggregates — Part 6: Resistance to freezing and thawing in the presence of salt*

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 1097, *Tests for mechanical and physical properties of aggregates*

EN 1744, *Tests for chemical properties of aggregates*

EN 13179, *Tests for filler aggregate used in bituminous mixtures*

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

1 Scope

This European Standard specifies a test method which provides information on how an aggregate behaves when it is subjected to the cyclic action of freezing and thawing.

NOTE The stresses on aggregates due to frost depend, amongst other factors, on the degree of water saturation as well as the rate of cooling.

The results provide a means for assessing an aggregate's resistance to this form of weathering.

The test is applicable to aggregates having a particle size between 4 mm and 63 mm.

2 Normative references

The following referenced documents are indispensable for the application 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 932-1, *Tests for general properties of aggregates — Part 1: Methods for sampling*

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 933-2, *Tests for geometrical properties of aggregates — Part 2: Determination of particle size distribution — Test sieves, nominal size of apertures*

EN 1097-2, *Tests for mechanical and physical properties of aggregates — Part 2: Methods for the determination of resistance to fragmentation*

3 Terms and definitions

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

3.1

test specimen

sample used in a single determination when a test method requires more than one determination of a property

3.2

laboratory sample

reduced sample derived from a bulk sample for laboratory testing

3.3

constant mass

successive weightings 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.