# Geotekstiil ja samalaadsed tooted. Dünaamiline perforatsioonikatse (koonuse kukkumiskatse)

Geosynthetics - Dynamic perforation test (cone drop test)



#### **EESTI STANDARDI EESSÕNA**

#### **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN ISO
13433:2006 sisaldab Euroopa standardi
EN ISO 13433:2006 ingliskeelset teksti.

This Estonian standard EVS-EN ISO 13433:2006 consists of the English text of the European standard EN ISO 13433:2006.

Käesolev dokument on jõustatud 20.09.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.

This document is endorsed on 20.09.2006 with the notification being published in the official publication of the Estonian national standardisation organisation.

Standard on kättesaadav Eesti standardiorganisatsioonist.

The standard is available from Estonian standardisation organisation.

#### Käsitlusala:

# See Euroopa standard määrab kindlaks geotekstiili ja geotekstiilitaoliste toodete vastupidavuse määramise kindlalt kõrguselt langeva teraskoonuse toimele. Läbistamise aste näitab, kuidas toode tõenäoliselt reageerib teravate kivide kukkumisele geotekstiili pinnale. Meetod on rakendatav peamiselt geotekstiili ja geotekstiilitaoliste toodete puhul.

#### Scope:

This International Standard specifies a method to determine the resistance of geosynthetics to penetration by a steel cone dropped from a fixed height. The degree of penetration is an indication of the behaviour of the geosynthetic when sharp stones are dropped on its surface.

**ICS** 59.080.70

**Võtmesõnad:** geotekstiil, kukutamiskatsed, läbistamiskatsed, mehaanilised katsed, perforatsioonijõud, tekstiil

# EUROPEAN STANDARD NORME EUROPÉENNE

**EUROPÄISCHE NORM** 

#### **EN ISO 13433**

August 2006

ICS 59.080.70

Supersedes EN 918:1995

#### **English Version**

# Geosynthetics - Dynamic perforation test (cone drop test) (ISO 13433:2006)

Géosynthétiques - Essai de perforation dynamique (essai par chute d'un cône) (ISO 13433:2006)

Geokunststoffe - Dynamischer Durchschlagversuch (Kegelfallversuch) (ISO 13433:2006)

This European Standard was approved by CEN on 1 July 2006.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, 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.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

#### **Foreword**

This document (EN ISO 13433:2006) has been prepared by Technical Committee CEN/TC 189 "Geosynthetics", the secretariat of which is held by IBN, in collaboration with Technical Committee ISO/TC 221 "Geosynthetics".

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 February 2007, and conflicting national standards shall be withdrawn at the latest by February 2007.

This document supersedes EN 918:1995.

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

## INTERNATIONAL **STANDARD**

ISO 13433

> First edition 2006-08-01

### Geosynthetics — Dynamic perforation test (cone drop test)

Géosynthétiques — Essai de perforation dynamique (essai par chute



#### PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below

#### © ISO 2006

vems
vems
vem relating to it is

relating to the vertical formula of the verti All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office Case postale 56 • CH-1211 Geneva 20 Tel. + 41 22 749 01 11 Fax + 41 22 749 09 47 E-mail copyright@iso.org Web www.iso.org Published in Switzerland

#### **Contents** Page Foreword iv 1 2 3 4 5 6 Specimens ....... 5 6.1 Number and dimension of specimens......5 6.2 7 8

Calculation 6
Test report 6

9

10

#### **Foreword**

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 13433 was prepared by the European Committee for Standardization (CEN) Technical Committee ech.
on betv. CEN/TC 189, Geosynthetics in collaboration with Technical Committee ISO/TC 221, Geosynthetics, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

#### **Geosynthetics** — Dynamic perforation test (cone drop test)

#### 1 Scope

This International Standard specifies a method to determine the resistance of geosynthetics to penetration by a steel cone dropped from a fixed height.

The degree of penetration is an indication of the behaviour of the geosynthetic when sharp stones are dropped on its surface.

The method is generally applicable to geosynthetics. However, the validity of this test for some types of products should be considered carefully, as the test principle may not be applicable.

#### 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the cited edition applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 554, Standard atmospheres for conditioning and/or testing — Specifications

ISO 9862, Geosynthetics — Sampling and preparation of test specimens

ISO 10320, Geotextiles and geotextile-related products — Identification on site

#### 3 Terms and definitions

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

#### 3.1

#### hole size

diameter of the hole made by the cone in penetrating the specimen

NOTE The hole size is measured in millimetres.

#### 4 Principle

The specimen is clamped horizontally between two steel rings. A stainless steel cone is dropped, point first, from a distance of 500 mm onto the centre of the specimen. The degree of penetration is measured by inserting a narrow-angle graduated cone into the hole.

© ISO 2006 – All rights reserved