Geotextiles and geotextile-related products - Screening test methods for determining the resistance to acid and alkaline liquids (ISO 12960:2020)

EESTI STANDARDIKESKUS
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NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 12960:2020 sisaldab Euroopa standardi EN ISO 12960:2020 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 12960:2020 consists of the English text of the European standard EN ISO 12960:2020.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 17.06.2020.	Date of Availability of the European standard is 17.06.2020.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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EUROPEAN STANDARD

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English Version

Geotextiles and geotextile-related products - Screening test methods for determining the resistance to acid and alkaline liquids (ISO 12960:2020)

Géotextiles et produits apparentés - Méthodes d'essai sélectives pour la détermination de la résistance aux liquides acides et alcalines (ISO 12960:2020)

Geotextilien und geotextilverwandte Produkte - Auswahlprüfverfahren zur Bestimmung der Beständigkeit gegenüber sauren und alkalischen Flüssigkeiten (ISO 12960:2020)

This European Standard was approved by CEN on 3 May 2020.

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

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

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European foreword

This document (EN ISO 12960:2020) has been prepared by Technical Committee ISO/TC 221 "Geosynthetics" in collaboration with Technical Committee CEN/TC 189 “Geosynthetics” the secretariat of which is held by NBN.

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 2020, and conflicting national standards shall be withdrawn at the latest by December 2020.

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 14030:2001.

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, 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.

Endorsement notice

The text of ISO 12960:2020 has been approved by CEN as EN ISO 12960:2020 without any modification.

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

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

This first edition of ISO 12960 cancels and replaces ISO/TR 12960:1998, which has been technically revised. This document consolidates ISO/TR 12960:1998 and EN 14030:2001 and replaces both.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

In nearly all applications, geotextiles and geotextile-related products (hereinafter, geotextile products) can be in contact with aqueous solutions of acids, bases or dissolved oxygen. The resistance of geotextile products to these chemicals depends, on the one hand, on polymer formulation, processing, textile structure and the presence of existing damage and, on the other hand, on the composition of the liquid and in situ conditions such as temperature, pressure and the presence of further mechanical stress.

It is the purpose of this document to provide methods of screening (index testing) the resistance of geotextile products to acids and bases.

Since an index test requires exposure times that are short compared to the expected lifetimes of geotextile and geotextile-related products, the process needs to be accelerated. The data obtainable are suitable for screening but not for deriving performance data such as lifetime, unless supported by further evidence.

Geotextiles and geotextile-related products — Screening test methods for determining the resistance to acid and alkaline liquids

1 Scope

This document specifies methods for screening the resistance of geotextile and geotextile-related products to liquids while not subjecting them to external mechanical stress.

It is applicable to all geotextiles and geotextile-related products. Method A applies particularly to polyamides and method B to polyesters and polyamides. The test results are intended to be interpreted in the context of site conditions.

This document is intended to be used in conjunction with ISO/TS 13434.

NOTE This document only considers conditions where the specimens are fully immersed in the liquids. Though outside the scope of this document, the test conditions can be modified to accommodate particular applications, e.g. gaseous media. This document does not preclude use for test specimens that are pre-treated by some method, e.g. by weathering, aqueous extraction conditions or installation damage.

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.

ISO 3696, *Water for analytical laboratory use — Specification and test methods*

ISO 10318-1, *Geosynthetics — Part 1: Terms and definitions*

EN 12226, *Geosynthetics — General tests for evaluation following durability testing*

3 Terms and definitions

For the purpose of this document, the terms and definitions given in ISO 10318-1 apply.

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Principle

Test specimens are completely immersed in a test liquid for a given test duration at a fixed temperature. The properties of the test specimens are tested before and after immersion and, if applicable, after drying. Wherever possible, the test results are compared with those of control specimens stored under reference conditions.