



SLOVENSKI STANDARD
SIST EN ISO 12957-1:2019
01-marec-2019

Nadomešča:
SIST EN ISO 12957-1:2005

Geosintetika - Ugotavljanje tornih značilnosti - 1. del: Neposredni strižni preskus (ISO 12957-1:2018)

Geosynthetics - Determination of friction characteristics - Part 1: Direct shear test (ISO 12957-1:2018)

Geokunststoffe - Bestimmung der Reibungseigenschaften - Teil 1: Scherkastenversuch (ISO 12957-1:2018)

Géosynthétiques - Détermination des caractéristiques de frottement - Partie 1: Essai de cisaillement direct (ISO 12957-1:2018)

Ta slovenski standard je istoveten z: EN ISO 12957-1:2018

ICS:

59.080.70 Geotekstilije Geotextiles

SIST EN ISO 12957-1:2019 **en,fr,de**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 12957-1:2019](https://standards.iteh.ai/catalog/standards/sist/6d47f05b-e4d3-42a5-b1b3-9a314203faf3/sist-en-iso-12957-1-2019)

<https://standards.iteh.ai/catalog/standards/sist/6d47f05b-e4d3-42a5-b1b3-9a314203faf3/sist-en-iso-12957-1-2019>

EUROPEAN STANDARD

EN ISO 12957-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2018

ICS 59.080.70

Supersedes EN ISO 12957-1:2005

English Version

Geosynthetics - Determination of friction characteristics - Part 1: Direct shear test (ISO 12957-1:2018)

Géosynthétiques - Détermination des caractéristiques
de frottement - Partie 1: Essai de cisaillement direct
(ISO 12957-1:2018)

Geokunststoffe - Bestimmung der
Reibungseigenschaften - Teil 1: Scherkastenversuch
(ISO 12957-1:2018)

This European Standard was approved by CEN on 8 December 2018.

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.

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



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

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

Contents	Page
European foreword.....	3

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 12957-1:2019](https://standards.iteh.ai/catalog/standards/sist/6d47f05b-e4d3-42a5-b1b3-9a314203faf3/sist-en-iso-12957-1-2019)
<https://standards.iteh.ai/catalog/standards/sist/6d47f05b-e4d3-42a5-b1b3-9a314203faf3/sist-en-iso-12957-1-2019>

European foreword

This document (EN ISO 12957-1:2018) 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 June 2019, and conflicting national standards shall be withdrawn at the latest by June 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 ISO 12957-1:2005.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

iTeh STANDARD PREVIEW
Endorsement notice
(standards.iteh.ai)

The text of ISO 12957-1:2018 has been approved by CEN as EN ISO 12957-1:2018 without any modification.

[SIST EN ISO 12957-1:2019
https://standards.iteh.ai/catalog/standards/sist/6d47f05b-e4d3-42a5-b1b3-9a314203faf3/sist-en-iso-12957-1-2019](https://standards.iteh.ai/catalog/standards/sist/6d47f05b-e4d3-42a5-b1b3-9a314203faf3/sist-en-iso-12957-1-2019)

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 12957-1:2019](https://standards.iteh.ai/catalog/standards/sist/6d47f05b-e4d3-42a5-b1b3-9a314203faf3/sist-en-iso-12957-1-2019)

<https://standards.iteh.ai/catalog/standards/sist/6d47f05b-e4d3-42a5-b1b3-9a314203faf3/sist-en-iso-12957-1-2019>

INTERNATIONAL
STANDARD

ISO
12957-1

Second edition
2018-12

**Geosynthetics — Determination of
friction characteristics —**

**Part 1:
Direct shear test**

*Géosynthétiques — Détermination des caractéristiques de
frottement —*

iTeh STANDARD PREVIEW
Partie 1: Essai de cisaillement direct
(standards.iteh.ai)

[SIST EN ISO 12957-1:2019](https://standards.iteh.ai/catalog/standards/sist/6d47f05b-e4d3-42a5-b1b3-9a314203faf3/sist-en-iso-12957-1-2019)

<https://standards.iteh.ai/catalog/standards/sist/6d47f05b-e4d3-42a5-b1b3-9a314203faf3/sist-en-iso-12957-1-2019>



Reference number
ISO 12957-1:2018(E)

© ISO 2018

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 12957-1:2019](https://standards.iteh.ai/catalog/standards/sist/6d47f05b-e4d3-42a5-b1b3-9a314203faf3/sist-en-iso-12957-1-2019)

<https://standards.iteh.ai/catalog/standards/sist/6d47f05b-e4d3-42a5-b1b3-9a314203faf3/sist-en-iso-12957-1-2019>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2018

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms, definitions and symbols	1
4 Principle	3
5 Test specimens	3
5.1 Sampling	3
5.2 Number and dimensions of test specimens	3
6 Conditioning	3
7 Apparatus	4
8 Procedure	8
9 Calculations	9
10 Test report	10
Bibliography	12

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 12957-1:2019](https://standards.iteh.ai/catalog/standards/sist/6d47f05b-e4d3-42a5-b1b3-9a314203faf3/sist-en-iso-12957-1-2019)

<https://standards.iteh.ai/catalog/standards/sist/6d47f05b-e4d3-42a5-b1b3-9a314203faf3/sist-en-iso-12957-1-2019>

ISO 12957-1:2018(E)

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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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

For an explanation on 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 the following URL: www.iso.org/iso/foreword.html. (standards.iteh.ai)

This document was prepared by Technical Committee ISO/TC 221, *Geosynthetics*.

This second edition cancels and replaces the first edition (ISO 12957-1:2005), which has been technically revised. The main changes compared to the previous edition are as follows:

- introduction of the possibility to test the shear between two geosynthetics;
- introduction of the possibility to test soil different from the standard sand.

A list of all parts in the ISO 12957 series can be found on the ISO website.

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.

Geosynthetics — Determination of friction characteristics —

Part 1: Direct shear test

1 Scope

This document specifies an index test method to determine the friction characteristics of geosynthetics in contact with a standard sand as described in EN 196-1, i.e. with a specified density and moisture content, under a normal stress and at a constant rate of displacement, using a direct shear apparatus.

The same testing procedure can be used with any type of soil with the density and moisture content that are required to evaluate the performance under specific conditions or with another geosynthetic under a normal stress and at a constant rate of displacement, using a direct shear apparatus.

The procedure can also be used for testing geosynthetic barriers.

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 9862, *Geosynthetics — Sampling and preparation of test specimens*

3 Terms, definitions and symbols

For the purposes of this document, the following terms and definitions 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/>

3.1 relative displacement

s
displacement of the sand, soil or other geosynthetic relative to the specimen during shearing

Note 1 to entry: Relative displacement is expressed in millimetres (mm).

3.2 normal force

N
constant vertical force applied to the specimen

Note 1 to entry: Normal force is expressed in kilonewtons (kN).