BSI Standards Publication

Geosynthetics — Guidelines for the assessment of durability

National foreword

This Published Document is the UK implementation of ISO/TS 13434:2020. It supersedes DD ISO/TS 13434:2008, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/553, Geosynthetics.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Published by BSI Standards Limited 2020

ISBN 978 0 539 04964 0

ICS 59.080.70

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This Published Document was published under the authority of the Standards Policy and Strategy Committee on 30 November 2020.

Amendments/corrigenda issued since publication

Date	Text affected

TECHNICAL ISO/TS

Second edition
2020-10-30

Geosynthetics — Guidelines for the assessment of durability

Géosynthétiques — Lignes directrices concernant la durabilité

Reference number
ISO/TS 13434:2020(E)

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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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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.

ISO/TS 13434 was prepared by Technical Committee ISO/TC 221, *Geosynthetics*.

This first edition cancels and replaces ISO/TS 13434:2008, which has been technically revised. The main changes compared to the previous edition are as follows:

— standards and wording actualized;

— added product types in 5.1;

— updated subclauses 5.4, 8.4, 8.5 and Table 3.

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 — Guidelines for the assessment of durability

1 Scope

This document provides guidelines for the assessment of the durability of geosynthetics, the object of which is to provide the design engineer with the necessary information, generally defined as changes in material properties or as partial safety factors, to ensure that the expected design life of a geosynthetic can be achieved with confidence.

This document is not applicable to products designed to survive for only a limited time, such as erosion-control fabric based on natural fibres.

This document is applicable to the durability of the geosynthetics and not to the durability of the geotechnical structure as a whole.

NOTE The calculation of reduction factors for soil reinforcement applications is described in ISO/TR 20432.

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

ISO 13431, *Geotextiles and geotextile-related products — Determination of tensile creep and creep rupture behaviour*

ISO 13438:2018, *Geosynthetics — Screening test method for determining the resistance of geotextiles and geotextile-related products to oxidation*

3 Terms, definitions, symbols and abbreviated terms

3.1 Terms and definitions

For the purposes 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/

3.2 Symbols

A rate of degradation

A_0 constant in Arrhenius equation

d_{50} 50 % soil gradation

E activation energy