



BSI Standards Publication

**Geotextiles and geotextile-
related products —
Characteristics required for
the use in the construction of
reservoirs and dams**

National foreword

This British Standard is the UK implementation of EN 13254:2016. It supersedes BS EN 13254:2014+A1:2015 which is withdrawn.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 secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2016.
Published by BSI Standards Limited 2016

ISBN 978 0 580 91344 0

ICS 59.080.70

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 October 2016.

Amendments/Corrigenda issued since publication

Date	Text affected
------	---------------

EUROPEAN STANDARD

EN 13254

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2016

ICS 59.080.70

Supersedes EN 13254:2014+A1:2015

English Version

Geotextiles and geotextile-related products - Characteristics required for the use in the construction of reservoirs and dams

Géotextiles et produits apparentés - Caractéristiques
requis pour l'utilisation dans la construction de
réservoirs et de barrages

Geotextilien und geotextilverwandte Produkte -
Geforderte Eigenschaften für die Anwendung beim Bau
von Rückhaltebecken und Staudämmen

This European Standard was approved by CEN on 4 June 2016.

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, 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: Avenue Marnix 17, B-1000 Brussels

Contents

Page

European foreword.....	4
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms, definitions and abbreviations	7
3.1 Terms and definitions	7
3.2 Abbreviations	8
4 Required characteristics and corresponding methods of test	8
4.1 General	8
4.2 Selection of the appropriate standard in a specific application	8
4.3 Characteristics relevant to specific conditions of use	11
4.3.1 Stiffness at 2 %, 5 % and 10 %	11
4.3.2 Tensile strength of seams and joints	11
4.3.3 Static puncture	11
4.3.4 Friction characteristics	11
4.3.5 Tensile creep	11
4.3.6 Resistance to damage during installation	11
4.3.7 Water permeability normal to the plane	11
4.4 Release of dangerous substances	11
5 Assessment and verification of constancy of performance (AVCP)	12
5.1 General	12
5.2 Presentation of characteristics	12
5.3 Product type determination (PTD)	12
5.4 Factory production control (FPC)	13
5.5 Verification of values	13
5.6 Initial inspection of factory and of FPC	14
5.7 Continuous surveillance of FPC	14
6 Marking	14
Annex A (normative) Factory production control	15
A.1 Factory production control scheme	15
A.1.1 General	15
A.1.2 Product design	15
A.1.3 Production	15
A.1.4 Finished products	15
A.1.5 Provisions applicable to A.1.2, A.1.3 and A.1.4 (to be used where appropriate)	16
A.2 Assessment of a factory production control (FPC) system	17
A.2.1 General	17
A.2.2 Checklist	17
A.2.3 Test frequency	21
Annex B (normative) Durability aspects	22
B.1 General	22
B.1.1 Service life	22

B.1.2	Initial and repeat testing of durability	22
B.1.3	Use of rework material	22
B.2	Weathering (all products)	23
B.3	Products used in non-reinforcing applications and with service lives up to 5 years	23
B.4	Other applications and service lives up to 25 years, 50 years and 100 years	24
B.4.1	General	24
B.4.2	Tests for specific materials	24
Annex C (informative)	Guidelines for the selection of the appropriate standard in a specific application	27
Annex D (informative)	Significant technical changes to superseded versions of this standard	29
Annex ZA (informative)	Clauses of this European Standard addressing the provisions of the EU Construction Products Regulation	30
Bibliography	44

European foreword

This document (EN 13254:2016) has been prepared by 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 April 2017, and conflicting national standards shall be withdrawn at the latest by July 2018.

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 13254:2014+A1:2015.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Regulation No 305/2011.

For relationship with Regulation (EU) Nr. 305/2011, see informative Annex ZA, which is an integral part of this document.

Annex D provides details of significant technical changes between this European Standard and the previous edition.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This European Standard allows manufacturers to describe geotextiles and geotextile-related products on the basis of declared values for characteristics relevant to the intended use and if tested to the specified method. It also includes procedures for the assessment and verification of constancy of performance and factory production control.

This European Standard may also be used by designers, end-users and other interested parties to define which functions and conditions of use are relevant.

The term “product” used in this European Standard refers to a geotextile or geotextile-related product.

This European Standard is part of a series of standards, addressing the requirements for geotextiles and geotextile-related products when used in a specific application. Annex C provides guidance on how to select the appropriate standard.

1 Scope

This European Standard specifies the relevant characteristics of geotextiles and geotextile-related products used in the construction of reservoirs and dams, and the appropriate test methods to determine these characteristics.

The intended use of these geotextiles or geotextile-related products is to fulfil one or more of the following functions: filtration, separation, reinforcement and protection. The separation function will always occur in conjunction with filtration or reinforcement, and hence will not be specified alone.

This European Standard is not applicable to geosynthetic barriers, as defined in EN ISO 10318-1.

This European Standard provides for the assessment and verification of constancy of performance of the product to this European Standard and for factory production control procedures.

Particular application cases may contain requirements regarding additional properties and – preferably standardized – test methods, if they are technically relevant.

This European Standard may be used to derive design values by taking into account factors within the context of the definitions given in EN 1997-1 (Eurocode 7), e.g. factors of safety. The design life of the product should be determined, since its function may be temporary, as a construction expediency, or permanent, for the lifetime of the structure.

2 Normative references

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

EN 12224, *Geotextiles and geotextile-related products - Determination of the resistance to weathering*

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

EN 12447, *Geotextiles and geotextile-related products - Screening test method for determining the resistance to hydrolysis in water*

EN 13719, *Geosynthetics - Determination of the long term protection efficiency of geosynthetics in contact with geosynthetic barriers*

EN 14574, *Geosynthetics - Determination of the pyramid puncture resistance of supported geosynthetics*

EN ISO 1043-1, *Plastics - Symbols and abbreviated terms - Part 1: Basic polymers and their special characteristics (ISO 1043-1)*

EN ISO 3696, *Water for analytical laboratory use - Specification and test methods (ISO 3696)*

EN ISO 9862, *Geosynthetics - Sampling and preparation of test specimens (ISO 9862)*

EN ISO 10318-1, *Geosynthetics - Part 1: Terms and definitions (ISO 10318-1)*

EN ISO 10319, *Geosynthetics - Wide-width tensile test (ISO 10319)*

EN ISO 10320, *Geotextiles and geotextile-related products - Identification on site (ISO 10320)*

EN ISO 10321, *Geosynthetics - Tensile test for joints/seams by wide-width strip method (ISO 10321)*