



BSI Standards Publication

**Geotextiles and geotextile-
related products —
Characteristics required for use
in the construction of roads
and other trafficked areas
(excluding railways and asphalt
inclusion)**

National foreword

This British Standard is the UK implementation of EN 13249:2014. It supersedes BS EN 13249:2001 which is withdrawn.

BSI, as a member of CEN, is obliged to publish EN 13249:2014 as a British Standard. However, attention is drawn to the fact that during the development of this European Standard, the UK committee voted against its approval as a European Standard.

It is the opinion of the UK committee that Annex B is not fit for purpose. CEN/TC 189 have agreed to amend Annex B to take these concerns into account.

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

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 2014.
Published by BSI Standards Limited 2014

ISBN 978 0 580 74063 3

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 28 February 2014.

Amendments/corrigenda issued since publication

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

EUROPEAN STANDARD

EN 13249

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2014

ICS 59.080.70

Supersedes EN 13249:2000

English Version

Geotextiles and geotextile-related products - Characteristics required for use in the construction of roads and other trafficked areas (excluding railways and asphalt inclusion)

Géotextiles et produits apparentés - Caractéristiques requises pour l'utilisation dans la construction de routes et autres zones de circulation (à l'exclusion des voies ferrées et des couches de roulement)

Geotextilien und geotextilverwandte Produkte - Geforderte Eigenschaften für die Anwendung beim Bau von Straßen und sonstigen Verkehrsflächen (mit Ausnahme von Eisenbahnbau und Asphaltoberbau)

This European Standard was approved by CEN on 9 November 2013.

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

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	10
4.3.1 Stiffness at 2 %, 5 % and 10 %	10
4.3.2 Tensile strength of seams and joints	10
4.3.3 Static puncture	10
4.3.4 Friction characteristics	10
4.3.5 Tensile creep	10
4.3.6 Water permeability normal to the plane	10
4.4 Release of dangerous substances	10
5 Assessment and verification of constancy of performance (AVCP)	11
5.1 General	11
5.2 Presentation of characteristics	11
5.3 Product type determination (PTD)	11
5.4 Factory production control (FPC)	12
5.5 Verification of values	12
5.6 Initial inspection of factory and of FPC	12
5.7 Continuous surveillance of FPC	13
6 Marking	13
Annex A (normative) Factory production control	14
A.1 Factory production control scheme	14
A.1.1 General	14
A.1.2 Product design	14
A.1.3 Production	14
A.1.4 Finished products	14
A.1.5 Provisions applicable to A.1.2, A.1.3 and A.1.4 (to be used where appropriate)	15
A.2 Assessment of a factory production control (FPC) system	16
A.2.1 General	16
A.2.2 Checklist	16
A.2.3 Test frequency	19
Annex B (normative) Durability aspects	21
B.1 General	21

B.1.1	Service life	21
B.1.2	Initial and repeat testing of durability	21
B.1.3	Use of rework material (RWM)	22
B.2	Weathering (all products)	22
B.3	Products used in non-reinforcing applications and with service lives up to 5 years	22
B.4	Other applications and service lives up to 25 years, 50 years and 100 years	23
B.4.1	General	23
B.4.2	Tests for specific materials	23
Annex C	(informative) Guidelines for the selection of the appropriate standard in a specific application	27
Annex D	(informative) Significant technical changes to the superseded standard	29
Annex ZA	(informative) Clauses of this European Standard addressing the provisions of the EU Construction Products Regulation	30
ZA.1	Scope and relevant characteristics	30
ZA.2	Procedure for AVCP of Geotextiles and geotextiles-related products for the use in the construction of roads and other trafficked areas	33
ZA.2.1	Systems of AVCP	33
ZA.2.2	Declaration of performance (DoP)	36
ZA.3	CE marking and labelling	39
Bibliography	42

Foreword

This document (EN 13249:2014) 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 July 2014, and conflicting national standards shall be withdrawn at the latest by January 2016.

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

This document supersedes EN 13249:2000.

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

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 Regulation (EU) 305/2011.

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

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, 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 roads and other trafficked areas (excluding railways and asphaltic inclusion), 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, and reinforcement. 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.

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.

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

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

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

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)*

EN ISO 10722, *Geosynthetics - Index test procedure for the evaluation of mechanical damage under repeated loading - Damage caused by granular material (ISO 10722)*

EN ISO 11058, *Geotextiles and geotextile-related products - Determination of water permeability characteristics normal to the plane, without load (ISO 11058)*

EN ISO 12236, *Geosynthetics - Static puncture test (CBR test) (ISO 12236)*