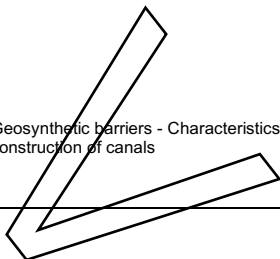


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Afdichtingen van geokunststof - Vereiste eigenschappen voor gebruik in de bouw van kanalen

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Geosynthetic barriers - Characteristics required for use in the construction of canals



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Preview

ICS 59.080.70; 91.100.50

English version

Geosynthetic barriers - Characteristics required for use in the construction of canals

Barrières géosynthétiques - Caractéristiques requises pour l'utilisation dans la construction des canaux

Geosynthetische Dichtungsbahnen - Eigenschaften, die für die Anwendung beim Bau von Kanälen erforderlich sind

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Foreword

This document prEN 13362:2002 has been prepared by Technical Committee CEN/TC 189 “Geosynthetics”, the secretariat of which is held by IBN.

This document is currently submitted to the Unique Acceptance Procedure.

This document replaces none.

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 Directive(s).

For relationship with EU Directive(s), see informative annex ZA, which is an integral part of this document.

Annexes A, B and C are normative.

This document includes a Bibliography.

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Preview

Introduction

This standard allows manufacturers to describe geosynthetic barriers 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 evaluation of conformity and factory production control.

This standard can also be used by designers, end-users and other interested parties as a tool to define relevant and appropriate characteristics for specifications and on-site quality control. It should be emphasised that not all characteristics and test methods quoted in this standard are suitable for the purpose of on-site quality control.

Tests for some non-mandated characteristics are still under study and will be included when the standard is revised.

The term "product" used in this standard refers to a geosynthetic barrier, including polymeric geosynthetic barriers, clay geosynthetic barriers and bituminous geosynthetic barriers.

This European standard is part of a group of standards, addressing the requirements for geosynthetic barriers when used in a specific application.

NOTE Particular application cases can contain requirements about additional properties and - preferably standardised - test methods, if they are technically relevant and not conflicting with European Standards. 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.

1 Scope

This European Standard specifies the relevant characteristics of geosynthetic barriers, including polymeric geosynthetic barriers, clay geosynthetic barriers and bituminous geosynthetic barriers, to be used as fluid barriers in the construction of canals, and the appropriate test methods to determine these characteristics.

The intended use of these products is to control the leakage of water through the construction.

This standard is not applicable to geotextiles or geotextile-related products.

This standard provides for the evaluation of conformity of the product to this European Standard.

This standard defines requirements to be met by manufacturers and distributors with regard to the presentation of product properties.

This standard does not cover applications where the geosynthetic barrier is to be in contact with water that has been treated for human consumption.

NOTE Where potable water is or may be in direct contact with the product the designer should also refer to other relevant standards, requirements and/or regulations.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 495-5 *Flexible sheets for waterproofing - Determination of foldability at low temperature - Part 5: Plastic and rubber sheets for roof waterproofing.*

prEN 13362:2002 (E)

- EN 963 *Geotextiles and geotextile-related products - Sampling and preparation of test specimens.*
- EN 964-1 *Geotextiles and geotextile-related products – Determination of thickness at specified pressures - Part 1: single layers.*
- EN 1109 *Flexible sheets for waterproofing - Bitumen sheets for roof waterproofing - Determination of flexibility at low temperature.*
- EN 1849-1 *Flexible sheets for waterproofing - Determination of thickness and mass per unit area - Part 1: Bitumen sheets for roof waterproofing.*
- EN 1849-2 *Flexible sheets for waterproofing - Determination of thickness and mass per unit area - Part 2: Plastic and rubber sheets for roof waterproofing.*
- EN 12224 *Geotextiles and geotextile-related products – Determination of the resistance to weathering.*
- EN 12225 *Geotextiles and geotextile-related products – Method for determining the microbiological resistance by a soil burial test.*
- EN 12226 *Geotextiles and geotextile-related products - General tests for evaluation following durability testing.*
- EN 12310-1 *Flexible sheets for waterproofing - Part 1: Bitumen sheets for waterproofing - Determination of resistance to tearing (nail shank).*
- EN 12311-1 *Flexible sheets for waterproofing - Part 1: Bitumen sheets for roof waterproofing - Determination of tensile properties.*
- prEN 13361:2002 *Geosynthetic barriers – Characteristics required for use in the construction of reservoirs and dams.*
- prEN 13491 *Geomembranes and geosynthetic clay liners - Required characteristics for use in tunnels and underground structures.*
- prEN 13492 *Geomembranes and geosynthetic clay liners - Required characteristics for use in the construction of liquid waste disposal sites or transfer stations.*
- prEN 13493 *Geomembranes and geosynthetic clay liners - Required characteristics for use in solid waste storages and waste disposal sites.*
- prEN 14150 *Geosynthetic barriers - Determination of permeability to liquids.*
- prEN 14151 *Geosynthetics - Determination of burst strength.*
- prEN 14196 *Geosynthetics - Test methods for measuring mass per unit area of clay geosynthetic barriers.*
- prEN 14414 *Geosynthetics - Screening test method for determining chemical resistance for landfill applications.*
- prEN 14415 *Geosynthetic barriers - Test method for determining the resistance to leaching.*
- prEN 14416 *Geosynthetic barriers - Test method for determining the resistance to roots.*
- prEN 14417 *Geosynthetic barriers - Test method for the determination of the influence of wetting-drying cycles on the permeability of clay geosynthetic barriers.*

prEN 14418	<i>Geosynthetic barriers - Test method for the determination of the influence of freezing-thawing cycles on the permeability of clay geosynthetic barriers.</i>
prEN ISO 10318	<i>Geosynthetics - Geotextiles, geotextile-related products, geomembranes and geosynthetic clay liners - Terms and their definitions (ISO/DIS 10318:2000).</i>
EN ISO 10319	<i>Geotextiles - Wide-width tensile test (ISO 10319:1993).</i>
EN ISO 10320	<i>Geotextiles and geotextile-related products – Identification on site.</i>
EN ISO 12236	<i>Geotextiles and geotextile-related products – Static puncture test (CBR test) (ISO 12236:1996).</i>
prEN ISO 12957-1	<i>Geotextiles and geotextile-related products – Determination of the friction characteristics – Part 1: Direct shear test (ISO/DIS 12957-1:1997).</i>
prEN ISO 12957-2	<i>Geotextiles and geotextile-related products – Determination of the friction characteristics - Part 2: Inclined plane test (ISO/DIS 12957-2:1997).</i>
ENV ISO 13438	<i>Geotextiles and geotextile-related products – Screening test method for determining the resistance to oxidation (ISO/TR 13438:1999).</i>
ISO 34	<i>Rubber, vulcanized or thermoplastic – Determination of tear strength.</i>
ISO 188:1998	<i>Rubber, vulcanized or thermoplastic - Accelerated ageing and heat resistance tests.</i>
ISO 527-1	<i>Plastics - Determination of tensile properties - Part 1: General principles.</i>
ISO 527-3	<i>Plastics - Determination of tensile properties - Part 3: Test conditions for films and sheets.</i>
ASTM D 696-91	<i>Standard test method for coefficient of linear thermal expansion of plastics between -20 °C and 30 °C.</i>
ASTM D 5397-95	<i>Standard test method for evaluation of stress crack resistance of polyolefin geomembranes using notched constant tensile load test.</i>
ASTM D 5887-95	<i>Standard test method for measurement of index flux through saturated geosynthetic clay liner specimens using a flexible wall permeameter.</i>
ASTM D 5890-95	<i>Standard test method for swell index of clay mineral component of geosynthetic clay liners.</i>

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this European Standard the terms and definitions given in prEN ISO 10318 and the following apply.

3.1.1

product

geosynthetic barrier, including polymeric, bituminous and clay barriers

3.1.2

specification

document in which the works, functions, specific conditions and required material property values of the geosynthetic barrier of use are described

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