



**SLOVENSKI STANDARD**  
**SIST EN 13254:2001/A1:2005**

**01-maj-2005**

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**Geotekstilije in geotekstilijam sorodni izdelki - Zahtevane lastnosti za uporabo pri gradnji zbiralnikov in jezov**

Geotextiles and geotextile-related products - Required characteristics for use in the construction of reservoirs and dams

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

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

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**Ta slovenski standard je istoveten z: EN 13254:2000/A1:2005**

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**ICS:**

59.080.70      Geotekstilije      Geotextiles

**SIST EN 13254:2001/A1:2005**      en,fr,de

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ICS 59.080.70

English version

## Geotextiles and geotextile-related products - Required characteristics for use in the construction of reservoirs and dams

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

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This amendment A1 modifies the European Standard EN 13254:2000; it was approved by CEN on 15 December 2004.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This amendment 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 Central Secretariat has the same status as the official versions.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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**EN 13254:2000/A1:2005 (E)**

## **Foreword**

This document (EN 13254:2000/A1:2005) has been prepared by Technical Committee CEN/TC 189 "Geosynthetics", the secretariat of which is held by IBN.

This Amendment to the European Standard EN 13254:2000 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by July 2005, and conflicting national standards shall be withdrawn at the latest by July 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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## 1 Modification to Clause 2

include reference to:

"ISO 10390:1994 – Soil quality – Determination of pH"

add reference to: "EN 14574 - Geosynthetics - Determination of the pyramid puncture resistance of supported geosynthetics"

## 2 Modification to Subclause 4.1, Table 1

sub (9) protection efficiency, column "Test method": replace by: "EN 13719 and EN 14574"

## 3 Modification to Subclause 5.2, Note 1

replace by:

"This method should not be used for on-site quality control purposes. On-site control procedures are described in CEN/TR 15019."

## 4 Modification to Subclause 5.4

add at the end of the 4<sup>th</sup> paragraph:

"The tasks of the manufacturer shall be described in detail including the type of tests to be performed and the frequency of these tests (see also Annex A, Clause A.2)."

## 5 Modification to Subclause 5.5

replace by:

"Inspection of the factory and of the factory production control shall be made not less than once a year, given constant production conditions, on the provisions contained in Clause 5.4 and Annex A. The inspection shall include an initial inspection of the factory and a continuous surveillance, assessment and approval of the factory production control, where required. The single steps of this inspection are specified in Annex A, Clause A.2"

## 6 Modification to Annex A

- Rename Annex A (normative) as: Factory Production Control

- Renumber and rename the current and its subclauses:

Annex A becomes A.1 Scheme of factory production control, A.1 becomes A1.1, A.2 becomes A1.2 etc.

- A.1.1.1 and A.1.1.2

Replace "design" by " product design"

- The introductory text shall read as:

"The items to be addressed in the factory production control manual relating to the system of control, determined from Clause 5.4, are given in Clause A.1. The single steps of factory production control are addressed in the checklist (A.2).

- Replace NOTE by:

NOTE Manufacturers operating a quality system conforming to EN ISO 9001:2000 are presumed to meet requirements of this Annex A.

After A.1.4.6, insert new Clause A.2: text see below

## A.2 Checklist for the assessment of a factory production control (FPC) system.

NOTE This checklist has been developed for CE marking, but may also be used for the purpose of voluntary certification systems.

### A.2.1 General

A factory production control system can only be applicable to one production site. In case of several production lines at the same site, all of them shall be checked.

The results of audits performed by a quality management system certification body (e.g. for ISO 9001:2000 certification) can be taken into account, although such certificate is not compulsory.

The FPC shall cover specified product ranges produced on the same production site. Each product covered by the FPC shall be clearly identified. To add a new product to the covered range, the producer shall submit the results of the initial type testing of the new product for an extension of the FPC system. This shall be taken into account at the next follow-up inspection. In case of a new production process the manufacturer shall apply for a new inspection visit.

Follow-up inspections shall take place not less than once a year.

All the questions in this checklist shall be checked at the first inspection visit and at each follow-up inspection.

### A.2.2 Checklist

The items marked with "E" are considered to be of essential importance, i.e. immediate corrective actions are needed if the requirement is not fulfilled.

The assessment can lead to A-, B- or C-type remarks.

A: an immediate corrective action is needed;

B: corrective action shall be taken within 3 months;

C: corrective action shall be taken before the next inspection visit.

If a B-type remark is not corrected in due time, it becomes an "A" and if a C-type remark is not corrected in due time, it becomes a "B".

Question	Relevance	Comment
<b>1 Design</b>		
1.1 - Has the manufacturer a description how design requirements and criteria are identified, checked, controlled and updated to be unambiguous and relevant to the use of the product and its specification?		<i>To be assessed only if claimed by the manufacturer. Refer to the manufacturer's documentation.</i>
1.2 - Has the manufacturer a description of the communication of the design to the internal production departments or to external subcontractors?		<i>To be assessed only if claimed by the manufacturer. Refer to the manufacturer's documentation.</i>
<b>2 Product identification and traceability</b>		
2.1 -What are the means used for the unique identification of any individual finished product?	E	<i>Refer to the manufacturer's documentation.</i>
2.2 - Is it possible to identify and check date, place and general manufacturing conditions (including raw material used) through the identifications on the final product?	E	<i>Refer to the manufacturer's documentation.</i>
2.3 -Does the marking on the final product comply with EN ISO 10320?	E	
<b>3 Production process control</b>		
3.1 -Are there documents which define the production process parameters which could affect quality?	E	<i>Refer to the manufacturer's documentation.</i>
3.2 -Are the standards and procedures	E	

implemented?		
3.3 -Are the specified requirements concerning process validation, including the associated personnel and equipment, documented?	E	<i>Refer to the manufacturer's documentation.</i>
<b>4 Inspection and testing on receipt of raw materials</b>		
4.1 - Are there specification sheets concerning incoming raw materials?	E	<i>Refer to the manufacturer's documentation.</i>
4.2 -Are there documents which define what shall be done in case of non-conformance of raw materials?	E	<i>Refer to the manufacturer's documentation.</i>
4.3 -Are the nature and frequency of the evaluation of incoming raw materials described and followed?	E	<i>Refer to the manufacturer's documentation.</i>
<b>5 Inspection and testing during manufacturing</b>		
5.1 - Are there inspections or tests during the manufacturing process with specific requirement for the results?	E	<i>Refer to the manufacturer's documentation.</i>
5.2 - Are there documents concerning inspection or testing during the manufacturing process with requirement for the results?	E	<i>Refer to the manufacturer's documentation.</i>
5.3 - Do they define what shall be done in case of non-conformance of the product with the requirements?	E	<i>Refer to the manufacturer's documentation.</i>
5.4 - Are non-conforming products isolated from conform products when they are detected during manufacturing?	E	<i>Refer to the manufacturer's documentation.</i>
5.5 - Is there a procedure for handling non-conforming products?	E	<i>Refer to the manufacturer's documentation.</i>
<b>6 Final inspection and testing</b>		
6.1 -Are there installations, equipment and personnel for final inspection and tests?	E	<i>Refer to the manufacturer's documentation.</i> <i>This requirement may be fulfilled by concluding a subcontracting agreement with one or more organisations or persons having the necessary skills and equipment.</i>
6.2 -Are there standards and methods for final inspection and testing? Have they been implemented?	E	<i>Refer to the manufacturer's documentation.</i>
6.3 -What tests are implemented (standard used) and at what frequency? These tests should preferably be called up in the harmonised standards. The review of further tests for initial type testing shall not be part of follow-up inspections and refer to the mandated tests only. If the tests are not performed to these European Standards, does there exist a proven correlation between the test(s) used for FPC and the corresponding EN? — EN 918 - Geotextiles and geotextile-related products - Dynamic perforation test (cone drop test).  — EN ISO 10319 - Geotextiles - Wide width tensile test (ISO 10319:1993).  — EN ISO 11058 - Geotextiles and geotextile-related products - Determination of water	E	<i>Refer to the manufacturer's documentation.</i>

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<p>permeability characteristics normal to the plane, without load (ISO 11058:1999).</p> <p>— EN 12224 - Geotextiles and geotextile-related products - Determination of the resistance to weathering.</p> <p>— EN 12225 - Geotextiles and geotextile-related products - Method for determining the microbiological resistance by a soil burial test</p> <p>— EN ISO 12236 - Geotextiles and geotextile-related products - Static puncture test (CBR-Test) (ISO 12236:1996).</p> <p>— EN ISO 12956 - Geotextiles and geotextile-related products - Determination of the characteristic opening size (ISO 12956:1999).</p> <p>— EN 13719 - Geotextiles and geotextile-related products - Determination of the long term protection efficiency of geotextiles in contact with geosynthetic barriers and/or EN 14574 - Geosynthetics - Determination of the pyramid puncture resistance of supported geosynthetics.</p> <p>— EN ISO 13438 - Geotextiles and geotextile-related products - Screening test method for determining the resistance to oxidation (ISO 13438:2004).</p> <p>— EN 14030 - Geotextiles and geotextile-related products - Screening test method for determining the resistance to acid and alkaline liquids (ISO/TR 12960:1998, modified).</p> <p>— EN 12447 - Geotextiles and geotextile-related products - Screening test method for determining the resistance to hydrolysis in water.</p>		
<p>6.4 -Are the characteristics tested in accordance with the announced "application / function" combination(s) (see the relevant harmonised standard(s))?</p>	<p>E</p>	<p><i>Refer to the manufacturer's documentation.</i></p>
<p>6.5 - Are there documented specifications concerning the results for final inspection and testing?</p>	<p>E</p>	<p><i>Refer to the manufacturer's documentation.</i></p>
<p>6.6 – Do the required test results comply with the characteristics declared in the accompanying document?</p>	<p>E</p>	<p><i>Refer to the manufacturer's documentation.</i></p>
<p>6.7 - Are the requirements on the announced tolerances fulfilled for each product?</p>	<p>E</p>	<p><i>Refer to the manufacturer's documentation.</i></p>
<p>6.8 -Are there documented procedures which</p>	<p>E</p>	<p><i>Refer to the manufacturer's</i></p>



define what shall be done in case of non-conformance of the final product with the specified requirements?		<i>documentation.</i>
6.9 -Are there appropriated records which complete evidence that a product has been tested and is in conformance with the specified requirements?	E	<i>Refer to the manufacturer's documentation.</i>
6.10 -Is it possible through these records to identify the persons responsible for testing final products and for releasing the products for the market?	E	<i>Refer to the manufacturer's documentation.</i>
<b>7 Control of inspection, measuring and test equipment</b>		
7.1 -Are there defined procedures to control, calibrate and maintain the equipment used, to bring evidence of the conformance of the products with the specified requirements?	E	<i>Refer to the manufacturer's documentation.</i>
7.2 -Are inspection, measuring and test equipment calibrated and adjusted against equipment having a known and valid relationship to nationally or internationally recognized standards?	E	<i>Refer to the manufacturer's documentation.</i> (Check calibration records for inspection, measuring and test equipment and - if existing - round robin test results.)
<b>8 Control of non-conforming products</b>		
8.1 -Are there documented procedures to ensure that non-conforming products cannot be inadvertently used or delivered?	E	<i>Refer to the manufacturer's documentation.</i>
8.2 -In particular, are non-conforming products identified, documented and segregated from the rest of the production?	E	<i>Refer to the manufacturer's documentation.</i>
8.3 -Are there documented procedures which define responsibilities for the examination of non-conforming products and who has the authority to take decisions concerning them?	E	<i>Refer to the manufacturer's documentation.</i> (check organigram)
<b>9 Corrective actions</b>		
9.1 -Are there documented procedures to implement proper corrective actions concerning non-conformity?	E	<i>Refer to the manufacturer's documentation.</i>
9.2 -In this case are these procedures implemented and the corrective actions recorded (mainly these concerning consumer's complaints)?	E	<i>Refer to the manufacturer's documentation.</i>
9.3 -Have corrective actions been carried out from the previous audit? With which result?	E	<i>Refer to the manufacturer's documentation.</i>
<b>10 Handling, storage and packaging</b>		
10.1 -Are the methods used to protect the product during handling, storage and packaging described?		<i>Refer to the manufacturer's documentation.</i>
10.2 -Are handling, storage and packaging methods and means appropriate to prevent final products from being damaged or deteriorated?		
10.3 -Is the labelling of final products in conformance with the provisions of the harmonised standards?	E	
<b>11 Control of quality records</b>		
11.1 -Are quality records legible and retained for at least a 10 years period so as to be easily available on request?	E	<i>Electronically stored records shall be protected against changes and deletion. Refer to the manufacturer's documentation.</i>