SLOVENSKI STANDARD
SIST EN 13492:2005/A1:2007

01-januar-2007

Geosintetične zapore - Zahtevane lastnosti za uporabo pri konstrukciji odlagališč za tekoče odpadke, prenosnih postaj in drugih zabojnikov

Geosynthetic barriers - Characteristics required for use in the construction of liquid waste disposal sites, transfer stations or secondary containment

Geosynthetische Dichtungsbahnen - Eigenschaften, die für die Anwendung beim Bau von Deponien, Zwischenlagern und Auffangbecken für flüssige Abfallstoffe erforderlich sind

Géomembranes, géosynthétiques bentonitiques - Caractéristiques requises pour l'utilisation dans la construction des sites d'évacuation de résidus liquides, des stations de transfert ou enceintes de confinement secondaire

Ta slovenski standard je istoveten z: **EN 13492:2004/A1:2006**

ICS:

13.030.40	Naprave in oprema za odstranjevanje in obdelavo odpadkov	Installations and equipment for waste disposal and treatment
59.080.70	Geotekstilije	Geotextiles

SIST EN 13492:2005/A1:2007 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13492:2004/A1

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ICS 59.080.70; 91.100.50

English Version

Geosynthetic barriers - Characteristics required for use in the construction of liquid waste disposal sites, transfer stations or secondary containment

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This amendment A1 modifies the European Standard EN 13492:2004; it was approved by CEN on 12 July 2006.

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.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No. EN 13492:2004/A1:2006: E

Foreword

This document (EN 13492:2004/A1:2006) 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 13492:2004 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2007, and conflicting national standards shall be withdrawn at the latest by February 2007.

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.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

List of amendments:

Clause	Par, sentence, table	Current text	Proposed modification
2			- *Add* "ISO 527-4, *Plastics - Determination of tensile properties - Part 4: Test conditions for isotropic and orthotropic fibre-reinforced plastic composites"* *- Date ISO 527-1*, "ISO 527-1:1993" *- Date EN 13493*, "EN 13493:2005"
4.2	Table 1, row 4, gas permeability		- column Geosynthetic barrier, GBR-C: add "S" - column test method, GBR-C: add "EN 13493:2005, Annex C" - column remarks: - replace existing text by: "Applicable to covers and relevant areas where gas might occur. Not all product types may be suitable for liquid waste." - add note: NOTE At present there is no standardised test method for the determination of gas permeability of GBR-Cs. The test procedure described in EN 13493:2005, Annex C is currently experimental and can be used for information.
4.2	Table 1, row 6 tensile strength, last column	For GBR-P use ISO 527, parts 1 and 3, test specimen type 5 at a speed of 100 mm/min and report the maximum strength according to the test method	For GBR-P use ISO 527 parts 1 and 3, test specimen type 5 at a speed of 100 mm/min. For reinforced GBR-P use ISO 527 parts 1 and 4, specimen type 2 with width 50 mm, at a speed of 5 mm per minute. Report in all cases the maximum strength measured according to the test method.
4.2	Table 1, Row 7, elongation, last column	For GBR-P use ISO 527 part 1 and 3, test specimen type 5 at a speed of 100 mm/min; calculation of elongation as defined in ISO 527-1, 10.2, using grip separation measurement..	For GBR-P use ISO 527 parts 1 and 3, test specimen type 5 at a speed of 100 mm/min. For reinforced GBR-P use ISO 527 parts 1 and 4, specimen type 2, width 50 mm, at a speed of 5 mm per minute. Elongation at maximum strength shall in all cases be calculated as defined in ISO 527-1:1993, 10.2, using grip separation measurement.
Annex	1st par, 5th	prEN 13493 Geosynthetic barriers -	EN 13493, *Geosynthetic barriers - Characteristics required for use in the*

B.1	indent	Characteristics required for use in the construction of solid waste storage and disposal sites and storages for hazardous solid materials.	*construction of solid waste storage and disposal sites*
B.3.2	Beginning of clause		*add sentence*: Specimens for testing shall be cut from the exposed sample after the exposure period.
B.3.2	first indent	with one day	within three days
B.3.2	Table B.1, 2nd row, 1st column	one day	three days
B.3.2	Table B.1: 4th row		*remove row* (25 years)
B.3.2	After table		*Add sentence* "In the case of exposures on site of more than one year, the manufacturer shall provide a statement of the duration of resistance to weathering together with a technical justification."
B.6	1st par, 1st sentence	All GBR-P installed in the applications listed in B.1 above shall be tested for their resistance to stress cracking in accordance with ASTM D 5397-99 (Appendix).	All polymeric materials, including the polymeric membrane element of GBR-Cs, shall be tested. Specimens will be taken in the weakest direction according to the measured tensile yield strength. Normally this will be the cross machine direction i.e. the direction of the notch will be aligned with the machine direction. The test report shall state whether any failure to achieve 200 h is due to elongation without break and such failure shall be disregarded. In the case of GBR-Ps with textured surfaces the test shall be performed on a sample of the same material with smooth surfaces. Such sample shall be taken from one of the following sources: a) smooth surface GBR-P at the pre-textured stage of manufacture (if applicable); b) on a sample taken from any smooth surface welding selvedge provided at

			the edge of the roll.
B.7	2nd par, 3rd indent	the loss in mass of the sample shall not be greater than 25 per cent	the loss in mass of the sample shall not be greater than 5 per cent under Methods A and B, and 25 per cent under Method C. Method C is only required for applications covered by EN 13492 and EN 13493.
B.8	1st par.	All geosynthetic barriers installed in the applications listed in B.1 shall be tested for their resistance to oxidation according to prEN 14575 and to B.2. The conditions of exposure shall be 85 °C and 90 days. The retained tensile properties shall comply with the criteria stated in B.2.	All geosynthetic barriers (EN ISO 13438 shall be applicable for the geotextile elements and reinforcement yarns of GBR-C barriers) installed in the applications listed in B.1 shall be tested for their resistance to oxidation according to EN 14575 and to B.2. The conditions of exposure shall be 85 °C and 90 days. The retained tensile properties shall comply with the criteria stated in B.2.