

This is a preview of "ISO 13426-1:2003". [Click here to purchase the full version from the ANSI store.](#)

First edition
2003-01-15

Geotextiles and geotextile-related products — Strength of internal structural junctions —

Part 1: Geocells

*Géotextiles et produits apparentés — Résistance des liaisons de
structures internes —*

Partie 1: Géosynthétiques alvéolaires



Reference number
ISO 13426-1:2003(E)

© ISO 2003

This is a preview of "ISO 13426-1:2003". [Click here to purchase the full version from the ANSI store.](#)

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO 2003

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

This is a preview of "ISO 13426-1:2003". [Click here to purchase the full version from the ANSI store.](#)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 13426 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 13426-1 was prepared by the European Committee for Standardization (CEN) in collaboration with Technical Committee ISO/TC 221, *Geosynthetics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Throughout the text of this document, read "...this European Standard..." to mean "...this International Standard...".

ISO 13426 consists of the following parts, under the general title *Geotextiles and geotextile-related products — Strength of internal structural junctions*:

- *Part 1: Geocells*
- *Part 2: Geocomposites*

This is a preview of "ISO 13426-1:2003". Click here to purchase the full version from the ANSI store.

Contents

	page
Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	1
4.1 Method A: Tensile shear test (Figure 1)	2
4.2 Method B: Peeling test (Figure 2)	2
4.3 Method C: Splitting test (Figure 3)	2
4.4 Method D: Local overstressing test (Figure 4)	2
5 Conditioning of specimens	2
6 Test specimens	3
7 Apparatus	3
7.1 Tensile testing machine	3
7.2 Clamps	3
8 Test procedure	3
9 Calculations	4
9.1 General.....	4
9.2 Method A: Tensile shear	4
9.3 Method B: Peeling	4
9.4 Method C: Splitting	4
9.5 Method D: Local overstressing.....	5
10 Test report	5

This is a preview of "ISO 13426-1:2003". [Click here to purchase the full version from the ANSI store.](#)

Foreword

This document (EN ISO 13426-1:2003) has been prepared by Technical Committee CEN/TC 189 "Geosynthetics", the secretariat of which is held by IBN, in collaboration with Technical Committee ISO/TC 221 "Geosynthetics".

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 2003, and conflicting national standards shall be withdrawn at the latest by July 2003.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

Geocells are geotextile-related products composed of single strips interconnected in several possible ways (extrusion, thermal bonding, gluing, hot melt, stitching, etc) to form a panel of adjacent cells, where generally the contact between two elements occurs along lines or in specific points, and not uniformly on the whole surface. These lines or points are referred to as "junctions".

A geocell junction may fail in four different ways:

- 1) by shear (see Figure 1): when failure is caused by a force parallel to the junction itself;
- 2) by peeling or delamination (see Figure 2): when failure is caused by a force, normal to the junction, which separates the cells from each other at one edge of the junction;
- 3) by tensile stress (see Figure 3): when a force, normal to the junction, pulls away the two cells adjacent to the junction;
- 4) by local overstressing (see e.g. Figure 4: geocells secured with pins) : when the fixation element locally overstresses the junction, leading to a compression, shear or peel failure.

NOTE This can be considered as a performance property, in the same way as a tensile test on seams/joints.

It is therefore impossible to define one single testing method for measuring the junction strength of geocells. Hence this standard includes the principles for testing the four failure mechanisms explained above. These principles should be adapted to each single product. In order to avoid confusion about the interpretation of figures, reference should be made to the exact test method in test reports and data sheets, e.g. EN ISO 13426-1, method A – shear strength of internal structural junctions.