INTERNATIONAL STANDARD

ISO 9864

Second edition
2005-02-15

Geosynthetics — Test method for the determination of mass per unit area of geotextiles and geotextile-related products

Géosynthétiques — Méthode d'essai pour la détermination de la masse surfacique des géotextiles et produits apparentés

Reference number
ISO 9864:2005(E)

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

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 2.

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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 9864 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...".

This second edition cancels and replaces the first edition (ISO 9864:1990), which has been technically revised.

Contents

Foreword

This document (EN ISO 9864:2005) 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 August 2005, and conflicting national standards shall be withdrawn at the latest by August 2005.

This document supersedes EN 965:1995

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.

1 Scope

This document specifies a method for the determination of mass per unit area of geotextiles and geotextile-related products for identification purposes and for use in technical data sheets.

The method is applicable to all geotextiles and geotextile-related products.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 554 *Standard atmospheres for conditioning and/or testing — Specifications.*

EN ISO 9862, *Geosynthetics — Sampling and preparation of test specimens (ISO 9862:2005).*

3 Principle

The mass per unit area is calculated by weighing square or circular specimens of known dimensions cut from positions distributed over the full width and length of the sample.

4 Procedure

4.1 Specimens

Cut no less than ten specimens in accordance with EN ISO 9862 to a nominal size of 100 cm², using a die.

Cut the specimens in such a way that they are representative of the material to be tested. Measure the specimens to an accuracy of 0,5 %. If the structure of the product is such that a 100 cm² specimen is not representative, it may be necessary to use a larger specimen size in order to achieve the necessary accuracy of measurement.

Geotextile-related products with relatively large mesh sizes – such as geogrids or geonets – shall be cut half way between two links of the constituent elements. A specimen shall include at least 5 constituent elements in both directions. The area of the specimen shall be individually determined for each specimen.

Condition the specimens in accordance with ISO 554 for a period of 24 h unless it can be shown that the results are not affected by omitting this procedure.

4.2 Weighing

Weigh each specimen to an accuracy of 10 mg.

5 Expression of results

Calculate the mass per unit area ρ_A of each specimen, expressed in grams per square metre, using the equation

$$\rho_A = \frac{m \times 10\,000}{A}$$

where:

m is the mass of the specimen, in g;

A is the area of the specimen, in cm^2.

Calculate the mean mass per unit area, rounding the result to the nearest gram per square metre, and the coefficient of variation.

6 Test report

The test report shall include the following particulars:

a) statement that the test was performed in accordance with this document;

b) number of specimens tested;

c) conditioning atmosphere used;

d) in case of a specimen size larger than 100 cm^2, the size used, and a description (words, sketch or photograph) of the structure;

e) mean value of mass per unit area, in grams per square metre;

f) coefficient of variation;

g) details of any deviation from the specified test procedure;

h) date of the test.