

**Clay geosynthetic barriers (GBR-C) - Determination of
water absorption of bentonite (ISO 10769:2011)**

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NATIONAL FOREWORD

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English Version

Clay geosynthetic barriers - Determination of water absorption of
bentonite (ISO 10769:2011)

Géosynthétiques bentonitiques - Détermination de
l'absorption d'eau par la bentonite (ISO 10769:2011)

Geosynthetische Tondichtungsbahnen (GBR-C) -
Bestimmung der Wasseraufnahme von Bentonit (ISO
10769:2011)

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN ISO 10769:2011) has been prepared by Technical Committee ISO/TC 221 "Geosynthetics" in collaboration with Technical Committee CEN/TC 189 "Geosynthetics" the secretariat of which is held by NBN.

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of an identical text or by endorsement, at the latest by December 2011, and conflicting national standards shall be withdrawn at the latest by December 2011.

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Endorsement notice

The text of ISO 10769:2011 has been approved by CEN as a EN ISO 10769:2011 without any modification.

Contents		Page
Foreword		iv
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Principles	2
5	Apparatus	2
6	Preparation and size of specimens	2
7	Procedures	2
7.1	Preparation of the equipment	2
7.2	Test procedure	3
8	Test report	3
Annex A (informative) Water content diagram		7

Clay geosynthetic barriers — Determination of water absorption of bentonite

1 Scope

This International Standard specifies a method for determining the water absorption of bentonite. The bentonite component is a part of clay geosynthetic barriers (GBR-C). Water absorption depends on the specific surface of the fine particles and the surface activity of the bentonite. The test provides an index value for production control testing of GBR-C.

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 3310-1, *Test sieves — Technical requirements and testing — Part 1: Test sieves of metal wire cloth*

ISO 4793:1980, *Laboratory sintered (fritted) filters — Porosity grading, classification and designation*

ISO 11465, *Soil quality — Determination of dry matter and water content on a mass basis — Gravimetric method*

DIN 18132, *Soil, testing procedures and testing equipment — Determination of water absorption*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

water absorption

w_A

ratio of the mass of water, m_{wg} , absorbed by the dry bentonite specimen in the test apparatus to the dry mass, m_d , of the bentonite specimen

NOTE 1 $w_A = \frac{m_{wg}}{m_d}$

where m_{wg} is the limiting value of the absorbed water absorbed over the test period.

NOTE 2 The result may also be expressed as the proportion by mass, in %.