



**International
Standard**

ISO 12236

**Geosynthetics — Static puncture
test (CBR test)**

Géosynthétiques — Essai de poinçonnement statique (essai CBR)

**Third edition
2026-05**

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 221 *Geosynthetics*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 189, *Geosynthetics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 12236:2006) which has been technically revised.

The main changes are as follows:

- [Figure 4](#) has been revised;
- [Clause 8](#) has been updated;
- [Clause 10](#) has been updated;
- units have been made consistent.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Geosynthetics — Static puncture test (CBR test)

1 Scope

This document specifies a method for the determination of the puncture resistance by measuring the force required to push a flat-ended plunger through geosynthetics.

The test is normally carried out on dry specimens conditioned in the specified atmosphere.

The test is applicable to most types of geosynthetic products, but does not apply to products with apertures greater than 10 mm.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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*

ISO 7500-1, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system*

ISO 9862, *Geosynthetics — Sampling and preparation of test specimens*

ISO 9863-1, *Geosynthetics — Determination of thickness at specified pressures — Part 1: Single layers*

ISO 10320, *Geosynthetics — Identification on site*

3 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

plunger force

F

force as the plunger is pushed onto and through the specimen at a constant rate of displacement (3.3)

Note 1 to entry: The plunger force is expressed in kilonewtons.

Note 2 to entry: See [Figure 1](#).

3.2

push-through force

F_p

maximum plunger force (3.1) recorded for each single test

Note 1 to entry: The push-through force is expressed in kilonewtons.

Note 2 to entry: See [Figure 1](#).