

Textiles - Determination of resistance to water penetration - Hydrostatic pressure test (ISO 811:2018)

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EUROPEAN STANDARD

EN ISO 811

NORME EUROPÉENNE

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Supersedes EN 20811:1992

English Version

Textiles - Determination of resistance to water penetration - Hydrostatic pressure test (ISO 811:2018)

Textiles - Détermination de la résistance à la
pénétration de l'eau - Essai sous pression
hydrostatique (ISO 811:2018)

Textilien - Bestimmung des Widerstandes gegen das
Durchdringen von Wasser - Hydrostatischer
Druckversuch (ISO 811:2018)

This European Standard was approved by CEN on 15 March 2018.

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

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European foreword

This document (EN ISO 811:2018) has been prepared by Technical Committee ISO/TC 38 “Textiles” in collaboration with Technical Committee CEN/TC 248 “Textiles and textile products” the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by November 2018, and conflicting national standards shall be withdrawn at the latest by November 2018.

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

This document supersedes EN 20811:1992.

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Endorsement notice

The text of ISO 811:2018 has been approved by CEN as EN ISO 811:2018 without any modification.

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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 documents 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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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 38, *Textiles*, Subcommittee SC 2, *Cleansing, finishing and water resistance tests*.

This second edition cancels and replaces the first edition (ISO 811:1981).

The main changes to the previous edition are as follows:

- the first element of the title changed from *Textile fabrics* to *Textiles* to be in line with other TC 38/SC 2 documents;
- in the Scope, clarification that the applicability of the method is intended for water resistant fabrics;
- major editorial changes were made throughout the document to bring it up to date.

Textiles — Determination of resistance to water penetration — Hydrostatic pressure test

1 Scope

This document specifies a hydrostatic pressure method for determining the resistance of fabrics to penetration by water. The method is applicable to all types of fabrics which are intended to be water resistant whether or not they have been given a water-resistant or water-repellent finish.

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 139, *Textiles — Standard atmospheres for conditioning and testing*

ISO 3696, *Water for analytical laboratory use — Specification and test methods*

3 Terms and definitions

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

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

— ISO Online browsing platform: available at <https://www.iso.org/obp>

— IEC Electropedia: available at <http://www.electropedia.org/>

3.1

face

fabric surface intended to be the outer visible side in an end product

4 Principle

The hydrostatic head supported by a fabric is a measure of the opposition to the passage of water through the fabric. A specimen is subjected to a steadily increasing pressure of water on one side of the fabric, under standard conditions, until penetration occurs in three places. The pressure at which the water penetrates the fabric at the third place is noted. The water pressure may be applied from below or from above the test specimen. The chosen alternative shall be stated in the test report.

The result is immediately relevant to the behaviour of fabric articles which are subjected to water pressure for short or moderate periods of time.

5 Reagents

5.1 Water, grade 3 water in accordance with ISO 3696.

The water is in contact with the test specimen at either $20\text{ °C} \pm 2\text{ °C}$ or $27\text{ °C} \pm 2\text{ °C}$. The chosen alternative shall be stated in the test report. (The use of water at the higher temperature will yield lower values of hydrostatic head; the magnitude of this effect may vary from fabric to fabric.)