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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 4744-2013

**Textiles -- Testing and evaluation for water resistance --
Hydrostatic pressure method
(English Translation)**

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Foreword

This Standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This Standard replaces GB/T 4744-1997 "Textile fabrics - Determination of resistance to water penetration - Hydrostatic pressure test". Compared with GB/T 4744-1997, main differences in this Standard are as follows:

- modified the standard's name;
- modified the application scope of Clause 1;
- added Clause 3; and the relevant clauses after clause 3 are incremented;
- deleted the water pressure rise rate in 5.3 as 1.00kPa/min±0.05kPa/min;
- merged and simplified two articles in Clause 6;
- added sampling of joint sample in Clause 7;
- respectively added notes in 8.2, 8.3 and 8.4; deleted the reading accuracy of 8.4;
- added 9.2;
- deleted Annex A.

This Standard uses redrafting method to modify and adopt ISO 811:1981

"Textile fabrics - Determination of resistance to water penetration - Hydrostatic pressure test". Compared with ISO 811:1981, the main differences in this Standard are as follows:

- modified the standard's name;
- modified the application scope of Clause 1;
- added Clause 3; and the relevant clauses after clause 3 are incremented;
- simplified the principle of Clause 4;
- modified the chapter numbers of Clause 5; deleted the water pressure rise rate in 5.3 as 1.00kPa/min $\pm$ 0.05kPa/min;
- added sampling of joint sample in Clause 7;
- modified Clause 8 as descriptions in sub-clauses; respectively added notes in 8.2, 8.3 and 8.4; deleted the reading accuracy of 8.4;

Textiles - Testing and evaluation for water resistance -
Hydrostatic pressure method

1 Scope

This Standard specifies the method that uses hydrostatic pressure test to determine water resistance of textiles and gives evaluation on water resistance. This Standard is applicable to various fabrics (including composite fabrics) and their 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.

GB/T 6529, Textiles - Standard atmospheres for conditioning and testing
(GB/T 6529-2008, ISO 139:2005, MOD)

3 Terms and definitions

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

3.1 water resistance

The resistance of fabrics to wetting and penetration by water. The water resistance of fabrics is characterized by wetting level, hydrostatic pressure rating, water penetration.

3.2 hydrostatic pressure rating

The degree to which the fabric resists penetration by water.

3.3 face

The externally visible surface in the finished product.

7 Specimen

After sampling, minimize handling of specimen. Avoid forceful folding. Do not conduct other treatments except humidity conditioning (such as ironing). Cut at least 5 specimens from different parts of the fabric. The size of the specimen shall be able to meet the requirements of the test area. The specimen shall be as representative as possible. It may test without cutting the specimen.

It shall not test in areas with deep wrinkles or creases. If it is necessary to determine the hydrostatic pressure at the joint, the joint shall be located in the middle of the specimen.

8.2 Wipe the test water on the surface of clamping device. Clamp the specimen

that has been subjected to humidity conditioning to make the specimen face in contact with water surface. When clamping the specimen, ensure that the test water does not penetrate the specimen due to pressure before the test begins.

NOTE: If the fabric face cannot be determined, the coated side of the single-side coated fabric is in contact with water surface. Respectively test both sides of other fabrics. Respectively report the results.

8.3 At a water pressure rise rate of $6.0\text{kPa/min} \pm 0.3\text{kPa/min}$ ($60\text{cm H}_2\text{O/min} \pm 3\text{cm H}_2\text{O/min}$), apply an increasing water pressure to the specimen and observe water seepage.

NOTE: If other water pressure rise rates are used, such as 1.0kPa/min , indicate in the report.

8.4 Record the hydrostatic pressure value when the third drop of water on the specimen just appears. Do not consider the tiny droplets that do not grow after formation. Continuous water droplets exuding at the same place of the fabric are not accumulated. If the third water droplet appears on the edge of the clamping device, and the hydrostatic pressure value of the third water droplet is lower than the lowest value of other specimens of the same sample, then exclude this data, add specimens to test separately until normal test results are obtained.

NOTE: If the fabric breaks during the test, the water column sprays out or the composite fabric swells with water, record the pressure at this time and explain the test phenomenon in the report.

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