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

GB/T 4745-2012

**Textiles -- Testing and evaluation for water resistance -- Spray
test method**

(English Translation)

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009 and GB/T 20000.2-2009.

This standard replaces GB/T 4745-1997 "Textiles - Testing and evaluation for water resistance - Spray test method". Compared with GB/T 4745-1997, this standard has the following main differences:

- MODIFY the standard name;
- ADD two terms: water resistance and face (see 3.1 and 3.3);
- ADD the tolerance of specific parameters in the test device (see 5.1, 5.2, 5.3);
- REFINE the spray rating to half level (see 9.1);
- ADD water resistance evaluation (see 9.2);
- In Appendix A, ADD the images and corresponding descriptions of level 0 (see Appendix A).

This standard uses the redrafting method to amend and adopt ISO 4920:2012

"Textiles fabrics - Determination of resistance to surface wetting (spray test)".

Compared with ISO 4920:2012, the main differences between this standard are as follows:

- MODIFY the standard name;
- ADD the term of water resistance (see 3.1);
- REFINE the spray rating to half level (see 9.1);
- ADD the water resistance evaluation (see 9.2);
- In Appendix A, ADD the corresponding relationship between GB and ISO spray rating.

This standard was proposed by the China National Textile and Apparel Council.

This standard shall be under the jurisdiction of the Basic Standards Subcommittee of the National Textile Standardization Technical Committee (SAC/TC 209/SC 1).

Drafting organizations of this standard: Textile Industry Standardization Research Institute, Hutai (Panyu) Textile Printing and Dyeing Co., Ltd.

Textiles - Testing and evaluation for water resistance -
Spray test method

1 Scope

This standard specifies the method for measuring the water resistance of fabrics by the spray test; gives an evaluation of the water resistance.

This standard applies to fabrics with or without waterproof finishing.

This standard is not applicable to the determination of the water permeability of fabrics, nor to the prediction of the rain-proof permeability of fabrics.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this standard.

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

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Water resistance

The fabric's resistance to being wetted and penetrated by water. The indicators of the water resistance of the fabric include the spray rating, the hydrostatic pressure resistance level, the amount of water penetration.

3.2

Spray rating

The degree to which the surface of the fabric resists being wetted by water.

3.3

5.4 Test water, distilled water or deionized water, the temperature is $(20 \pm 2) ^\circ\text{C}$
or $(27 \pm 2) ^\circ\text{C}$. With the consent of relevant parties, test water at other temperatures can be used; the water temperature is indicated in the test report.

6 Atmosphere for humidity control and test

The standard atmosphere for humidity control and test shall be implemented in accordance with the requirements of GB/T 6529. With the permission of relevant parties, humidity control and testing can be carried out at room temperature or under actual conditions.

7 Specimen

Take at least three specimens from different parts of the fabric. Each specimen shall be at least 180 mm x 180 mm in size. The specimen shall be representative and there shall be no wrinkles or creases in the sampling location.

8.1 Humidify the specimen for at least 4 h under the atmospheric conditions specified in Chapter 6.

8.2 After the specimen is humidified, use the holder to clamp the specimen tightly and place it on the support. During the test, the front side of the specimen faces upwards. Unless otherwise required, the warp or length direction of the fabric shall be parallel to the direction of water flow.

8.3 Pour 250 mL of test water quickly and steadily into the funnel. Continue to spray for 25 s ~ 30 s.

8.4 After the spraying stops, immediately remove the holder holding the specimen, so that the face is almost horizontal. Then gently tap the holder against a solid hard object. Rotate the holder 180° horizontally. Then tap the holder lightly again.

8.5 After the tapping, according to the description of the wetness in Table 1, immediately rank the wetness of the specimen on the holder.

8.6 Repeat 8.1 ~ 8.5 steps to determine the remaining specimens.

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