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

GB/T 12705.2-2024

Replacing GB/T 12705.2-2009

**Textile - Methods of testing the down-proof property - Part 2:
Tumble test**

纺织品 防钻绒性试验方法 第2部分：转箱法

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1 Scope

GB/T 12705.2-2024 is the Chinese national standard on textile - methods of testing the down-proof property - part 2: tumble test, in the field of textile and leather technology. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 25 April 2024 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 November 2024. Classification: ICS 59.080.30, CCS W04. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document describes a method for determining the down-proof property of fabrics and products made from them by the tumble method. This document applies to textile products filled with down and feathers and the fabrics used to make such products. This document does not apply to products filled with a blend of down, feathers and other fillings.

2 Normative references

The provisions of the following documents constitute the essential clauses of this document through normative references in this text. Among them, for referenced documents with

dates, only the versions corresponding to the dates are applicable to this document; for referenced documents without dates, the latest versions (including all amendments) are applicable to this document.

GB/T 6529 Textiles - Standard atmospheres for conditioning and testing

GB/T 8170 Rules of rounding off for numerical values & expression and judgment of limiting values

GB/T 8629-2017 Textiles - Domestic washing and drying procedures for textile testing

GB/T 17685-2016 Down and feather

GB/T 31907 Method of garment measurement QB/T 1514-2011 Needles for household sewing machines

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 down-proof property The property of a fabric to prevent feathers, down, down fibers and feather fibers from sticking out from its surface.

4 Principle

The fabric sample is made into a sample bag of a certain size, and a certain mass of down and feather filling is filled into it, or the down and feather products are directly used as samples.

5 Equipment, utensils and materials

5.1 Down-proof testing machine The down-proof testing machine consists of a rotary box that can rotate forward and backward and its electrical control part, has the functions of a preset number of revolutions and automatic stop when the number of revolutions is full.

5.2 Rubber ball The specifications of the rubber ball are shown in Table 1, and the shape of the special- shaped ball is shown in Figure 1.

8.2.4 Use an electric heat gun (5.7) to seal the laboratory seams and rolled edges of the sample bag (make sure the needle holes of the laboratory seams are sealed). The side seams and surface seams of the original product are kept without sealing.

8.4 Specimen washing and drying procedures If it is necessary to test and evaluate the down-proof property of the sample after washing, the unsealed sample bag (see

8.1 or 8.2) or the sample to be tested as a whole (see 8.3) shall be washed and dried once according to the 4N program washing (type A reference washing machine, reference detergent type-3) and program A drying specified in GB/T 8629-2017.

9 Selection of test conditions

9.1 Conventional test conditions Select the test conditions in Table 3 for testing according to the specimen type.

10 Test steps

10.1 Select the appropriate test conditions according to the type and requirements of the specimen in accordance with Table 3 or Table

4. Before testing, clean the feathers, down, down fibers and feather fibers inside and outside the rotary box of the down-proof testing machine (5.1). Clean the rubber balls (5.2) and place the corresponding number of rubber balls in the rotary box.

10.3 Preset the corresponding number of revolutions of the down-proof testing machine according to the selected test conditions, press the forward start button, and the rotary box will start to rotate.

10.4 When the testing machine stops automatically after reaching the full count, take out the sample bag or the whole-piece test specimen, check and count the number of feathers, down, down fibers and feather fibers that stick out more than 2 mm from the surface of the sample bag or the whole-piece test specimen, and then check and count the number of feathers, down, down fibers and feather fibers in the rotary box and on the rubber ball.