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

GB/T 45613-2025

**Leather - Physical and mechanical tests - Determination of
water vapour absorption**

皮革 物理和机械试验 吸湿性的测定

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is modified to adopt ISO 17229:2016 "Leather - Physical and mechanical tests - Determination of hygroscopicity".

Compared with ISO 17229:2016, this document has many structural adjustments. Comparison table of structural number changes between the two documents See Appendix A.

The technical differences between this document and ISO 17229:2016 and their reasons are as follows.

--- Deleted the specific test content involved in the principle (see Chapter 3 of ISO 17229:2016), which is in line with the writing practice of my country's standards Useful, easy to use;

--- Regarding the regulation of die cutter and specimen, the normative reference QB/T 2707 replaces ISO 2419 (see 5.6 and 6.3).

To adapt to my country's technical conditions and be easy to use;

--- Regarding the provisions for test water, the normative reference GB/T 6682 replaces ISO 3696 (see 5.7) to adapt to my country's Technical conditions, easy to use;

--- Regarding the provisions for sampling of standard parts, the normative reference GB/T 39364 replaces ISO 2418 (see 6.1) to adapt to Our country's technical conditions make it easy to use;

--- Added provisions for sampling from non-standard parts (see 6.1) to meet the daily

testing needs of sampling directly from shoes and clothing;

--- Added provisions for the test environment (see 6.3) to avoid ambiguity;

--- Increased the optionality of test time (see 7.5) to meet the testing requirements of different types of products;

--- Changed the content of the test report (see Chapter 9) to be consistent with other standards in the industry. The following editorial changes were made to this document.

--- Added the first-level title of "Sampling and specimen preparation";

--- Added examples of sample placement;

--- Added explanations for some letter codes in the formula;

--- Replaced ISO 14268 with the informative reference GB/T 39369.

1 Scope

This document describes the test method for the hygroscopicity of leather.

This document is applicable to the determination of hygroscopicity of various types of leather (especially upper leather and lining leather).

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 6682 Specifications and test methods for water used in analytical laboratories (GB/T 6682-2008, ISO 3696:1987, MOD)

GB/T 39364 Sampling locations for chemical, physical, mechanical and colour fastness tests on leather (GB/T 39364-2020, ISO 2418. 2017,MOD)

QB/T 2707 Preparation and conditioning of leather physical and mechanical test specimens

3 Terms and definitions

There are no terms or definitions that require definition in this document.

4 Principle

Clamp the leather sample and the impermeable material above a container filled with water. After a specified time, weigh the mass of the sample and calculate the mass before and after the test.

The increase in sample mass per unit area is used to characterize the hygroscopicity of the sample.

5 Instruments and Materials

5.1

Cylindrical container, made of metal or glass, with an inner diameter of (35 ± 0.5) mm, an inner depth of (104 ± 1) mm, and a top outer diameter ≥ 55 mm, with A metal ring or cover is used to secure the specimen to the cylindrical container.

5.3

Timer, with a graduation value of 1min.

5.4

Vernier caliper, graduation value is 0.1mm.

5.5

A disc made of impermeable material (such as rubber or metal) with the same diameter as the test specimen.

5.6

Die cutter. in accordance with the requirements of QB/T 2707, with an inner wall of a cylinder with a diameter of (43 ± 1) mm.

5.7

Distilled water or deionized water, in accordance with the requirements for Grade III water in GB/T 6682.

6.1 Sampling

Follow the provisions of GB/T 39364. If it is not possible to take samples from the standard parts (such as directly from shoes or clothing),