

ICS 59.140.30
CCS Y 46



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

GB/T 43818.1-2024

**Leather - Determination of abrasion resistance - Part 1: Taber
method**

(English Translation)

Issued on: March 15, 2024

Implemented on: October 1, 2024

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

Table of Contents

- Foreword
- Introduction
- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Principle
- 5 Instruments and equipment

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 part 1 of GB/T 43818 "Determination of abrasion resistance of leather". GB/T 43818 has been published in the following parts.

--- Part 1: Taber method;

--- Physical and mechanical tests for leather. Determination of abrasion resistance. Martindale ball-on-disc method (GB/T 39507-2020).

This document is modified to adopt ISO 17076-1:2020 "Determination of the abrasion resistance of leather - Part 1: Taber method".

Compared with ISO 17076-1:2020, this document has many structural adjustments. A comparison of the structural number changes between the two documents See Appendix A for the table.

The technical differences between this document and ISO 17076-1:2020 and their reasons are as follows.

--- Added a description of the scope of application of the document (see Chapter 1), which complies with the writing requirements of my country's standards;

--- Deleted the description of the ISO and IEC online database of terms and definitions in "3 Terms and Definitions" (see ISO 17076-1.

2020, Chapter 3), has no practical significance for the use of our country's standards and does not affect the understanding and use;

- Changed the description of the grinding wheel diameter (see 5.6) to avoid ambiguity;
- Change "compressed air" to "vacuum cleaner" (see 5.11) to make the meaning clearer;
- Regarding the requirements for grey scales for assessing color change, the normative reference GB/T 250 replaces ISO 105-A02 (see 5.13) to adapt to my country's technical conditions and facilitate use;
- Regarding the range of allowable unbalance of grinding wheels, the normative reference GB/T 2492 replaces ISO 6103 (see 5.15) to adapt to my country's technical conditions and facilitate use;
- Added "mold knife" (see 5.16), which is added according to the actual needs during the operation and is easy to use;
- Regarding the provisions on sampling locations, the normative reference GB/T 39364 replaces ISO 2418 (see 6.1) to adapt to my country's Technical conditions, easy to use;
- Added provisions for sampling of non-standard parts (see 6.1) to meet daily testing needs;
- Regarding the adjustment provisions of the specimen, the normative reference QB/T 2707 replaces ISO 2419 (see 6.3) to adapt to the technical requirements of my country. Technical conditions, easy to use;
- Deleted the descriptive content about the preparation and cleaning of different types of grinding wheels in "7 Test steps" (see ISO 17076-1:2020 7.1.1 and 7.3.1), the structure is clearer;
- Added requirements for cleaning the grinding wheel during the test when the wear times are high (see 7.2.4) to avoid the loss of sand particles and the impact on the test results.

The impact of

- Deleted the statement that each piece of sandpaper is used to clean three grinding wheels (see 7.3.2.3) to avoid ambiguity;
- Added "result presentation" and clarified the method of presenting results (see Chapter 8) for easier operation.

The following editorial changes were made to this document.

- Deleted the principle note;
- Deleted the sandpaper specification examples;
- Added the title of "Sampling and sample preparation";
- Adjusted the word order in "Preparation of sample";

- Added some headings in "Test Procedure";
- Added explanatory notes on the number of wear resistance;
- Deleted the informative Appendix A.

Introduction

Wear resistance refers to the property of leather to resist friction. It is not only a characteristic of leather (especially decorative leather) and its coating performance.

It is an important indicator and an important component of the physical and mechanical properties of leather and its products. If the wear resistance is poor, the leather product will not only will the surface coating fall off, but dark leather products may even stain the wearer's clothes, shoes, socks, etc.

The wear resistance of leather affects the performance of the product. Therefore, the determination of leather wear resistance is very important in the quality control of leather products (especially decorative leather).

GB/T 43818 aims to provide a basis for the determination of leather wear resistance and is intended to consist of two parts.

--- Part 1: Taber method. The purpose is to establish a test method for determining the wear resistance of leather by the grinding wheel friction method.

--- Part 2: Martindale ball-on-disc method. The purpose is to establish a test for determining the wear resistance of leather using the Martindale ball-on-disc method.

The biggest difference between the above two wear-resistant methods is the evaluation method of the product's wear resistance. The Taber method is to the wear resistance is expressed by the degree of damage to the coating after a certain number of frictions, while the Martindale ball-on-disc method is expressed by the degree of damage to the coating after a certain number of frictions.

The wear resistance is expressed by the number of frictions at the damage point. For the wear resistance test of general soft leather, both methods can be used.

For thicker and harder leather, the Taber method is recommended.

The performance is mainly based on the industry standard QB/T 2726-2005 "Determination of wear resistance of leather by physical and mechanical tests".

ISO/NP17076.2004, the international standard has been revised to ISO 17076-1:2020, in terms of equipment, test conditions and operation in view of this, it is necessary to reformulate the test method to improve the compatibility with international standards.

While improving the consistency of standards, it also ensures the advancement and applicability of standard technology.

This document is Part 1 of GB/T 43818. When GB/T 39507-2020 is revised, it is intended to be Part 2 of GB/T 43818.

Determination of the abrasion resistance of leather Part 1: Taber Method

1 Scope

This document describes a test method for determining the abrasion resistance of leather by the Taber method.

This document is applicable to all kinds of leather with wear resistance requirements.

2 Normative references

The contents of the following documents constitute the 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 250 Textiles - Tests for colour fastness - Grey scale for assessing colour change (GB/T 250-2008, ISO 105-A02.

1993, IDT)

GB/T 2492 Bonded abrasives - Measurement of allowable unbalance of delivered grinding wheels (GB/T 2492-2017, ISO 6103:2014, 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 (QB/T 2707-2018, ISO 2419:2012, MOD)

3 Terms and definitions

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

4 Principle

Two grinding wheels are pressed on the sample with a specific pressure, so that the sample rotates horizontally around the vertical axis. One grinding wheel rubs the sample outward, while the other the grinding wheel rubs the specimen inwards. After rubbing for the