



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

GB/T 39371-2020

**Leather - Physical and mechanical tests - Determination of
softness**

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Foreword

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

This Standard uses the re-drafting method in the modification and adoption of ISO 17235:2015 Leather - Physical and Mechanical Tests - Determination of Softness.

In comparison with ISO 17235:2015, this Standard has major structural adjustments.

Appendix A provides a table of comparison of Chapter No. between this Standard and ISO 17235:2015.

In comparison with ISO 17235:2015, the technical differences and the causes for these differences are as follows:

---In terms of Normative References, this Standard adjusts the technical differences, so as to adapt to the technical conditions of our country. The adjustments are intensively reflected in Chapter 2 "Normative References". The specific adjustments are as follows:

? GB/T 39364, which modifies and adopts International standard, is used to replace ISO 2418 (see 5.1 and Chapter 8);

? QB/T 2707, which modifies and adopts International standard, is used to replace ISO 2419 (see 5.2);

- The description of the principle is modified (see Chapter 3);
- The description of the internal spring of the tester is added (see the description of "D" in Figure 1);
- Titles are added to 4.1 and 4.2 (see 4.1 and 4.2);
- The description of the effective total test force during static measurement in

4.1.8 of ISO 17235:2015 is modified into the NOTE of 4.1 (see 4.1);

- A title is added to the first clause of Chapter 6 (see Chapter 6);
- The NOTE of 6.1 is modified into the content of the main text, and expressed in the form of a table (see 6.1);
- The calibration process of the tester is detailed (see 6.2);
- The stipulation that the grain surface (or using surface) of the specimen is facing upward during the test is added (see 6.3);
- The requirements for result accuracy are added (see Chapter 7);
- The content of test report is modified (see Chapter 8).

Leather - Physical and Mechanical Tests -

Determination of Softness

1 Scope

This Standard specifies the method for the determination of softness of leather.

This Standard is applicable to the determination of softness of various types of flexible leather, such as: shoe upper leather, furniture leather, clothing leather and luggage leather, etc.

2 Normative References

The following documents are indispensable to the application of this document. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 39364 Leather - Chemical, Physical, Mechanical and Fastness Tests - Sampling

Location (GB/T 39364-2020, ISO 2418:2017, MOD)

QB/T 2707 Leather - Physical and Mechanical Tests - Sample Preparation and Conditioning (QB/T 2707-2018, ISO 2419:2012, MOD)

3 Principle

Clamp and fix the leather specimen on the base of the tester, then, at an appropriate speed, lower the cylindrical load stylus directly above the specimen. When it comes into contact with the specimen, it generates downward pressure, and the amount of deformation of the specimen represents its softness.

4.1 Softness Tester

As it is shown in Figure 1, the softness tester includes the following components:

---Circular aperture A, with a diameter of (35.0 ± 0.1) mm.

---Metal ring: compatible with the circular aperture A, which can respectively reduce its diameter to (25.0 ± 0.1) mm or (20.0 ± 0.1) mm.

example, incisions or scars. Release the cylindrical load stylus C, so that it generates a downward force. After the reading becomes stable, read and record it. This value is the softness value of the leather.

Change the test site of the specimen to test again, and measure at least 3 positions.

The test sites of the three tests shall be independent and non-overlapping. In other words, the distance between the centers of each test site shall be greater than the diameter of the fixation clamp B.

7 Result Expression

The softness of specimen is the arithmetic mean value of three determination results, accurate to 0.1 mm.

8 Test Report

The test report shall include the following contents:

- a) Serial No. of this Standard;
- b) Detailed information of the sample, and inconsistency with GB/T 39364 in

sampling;

c) Test conditions (standard atmosphere: 20 °C / 65%, 23 °C / 50%, or 27 °C / 65%);

d) Selected circular aperture for the test;

e) Tested part and reading each time;

f) Test results;

g) Any deviation from the method specified in this Standard.

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