

ICS 59.140

QB

**LIGHT INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

QB/T 2712-2005

**Leather. Physical and mechanical tests. Determination of
distension and strength of grain. Ball burst test
(English Translation)**

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Foreword

This standard is a revision of QB/T 3812.7-1999 Leather-Determination of distension and strength of grain-Ball burst test.

This standard is modified in relation to ISO 3379.1976 Leather - Determination of distension and strength of grain - Ball burst test, which is based on the standard IUP 9 of the International Union of Leather Technologists and Chemists Societies (IULTCS). Based on the Chinese actual situation, the following technical modifications were made to this standard when it was modified in relation to ISO 3379.1976.

- The descriptive "NOTE" in the scope has been removed.
- The original ISO standards cited in the section "Normative references" have been replaced by the relevant Chinese standards, and necessary reference standards have been added.
- In accordance with Chinese practice, the section "5 Test pieces" has been further refined into 5.1, 5.2, and 5.3 for ease of use.
- The requirements for the calculation results have been added to the section "Expression of results" to make it easier to use.

The following editorial changes were also made to this standard.

- The foreword to the ISO standard has been removed.
- The phrase "this international standard" has been changed to "this standard".
- The comma "," used as a decimal point has been replaced with a decimal point ".".

Compared with QB/T 3812.7-1999, the main changes in this standard are as follows.

- Chapter 2 "Normative references" has been added.
- Chapter 5 "Sampling and sample preparation" has been added.

This standard was proposed by the China National Light Industry Council.

This standard is under the jurisdiction of the National Technical Committee on Leather Industry of Standardization Administration of China (SAC/TC252).

This standard was drafted by the China Leather and Footwear Industry Research Institute.

Leather - Physical and mechanical tests - Determination of
distension and strength of grain - Ball burst test

1 Scope

This standard specifies the methods for determining the strength and distension of the grain side of leather.

This standard applies to all types of leather (light leather).

2 Normative references

The provisions in the following documents become the provisions of this standard through reference in this text. For the dated references, the subsequent amendments (excluding corrections) or revisions do not apply to this standard; however, parties who reach an agreement based on this standard are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest editions of the referenced documents apply to this standard.

QB/T 2706-2005 Leather - Chemical, physical and mechanical and fastness tests - Sampling location (ISO 2418.2002, MOD)

QB/T 2707-2005 Leather - Physical and mechanical tests - Sample preparation and

conditioning (ISO 2419.2002, MOD)

3 Principles

A steel ball is pressed against the center of the flesh side of a circular leather sample, which is secured around its perimeter with clamps. The pressure and distension are recorded when cracks and fractures occur on the grain side.

4 Apparatus

The apparatus for burst testing shall include the following parts (see Figure 1, Figure 2, and 7.2).

4.1 A clamp is used to fix the rim of the circular leather specimen, allowing the middle

part of the specimen to move freely.

When the middle part of the leather specimen is subjected to a force of 800 N, the specimen part held by the clamp shall remain stationary, and it shall be ensured that the clamped parts along the rim do not slip during the test. There shall be a clear boundary between the clamped part and the moving part of the specimen, and the diameter of the moving part of the specimen is 25.0 mm.

4.2 A push rod with a steel ball, the steel ball cannot rotate, acts on the center of the

specimen's flesh side. The force is measured by a measuring device. The distension rate generated by the relative movement of the ball and the clamp is (12 ± 2) mm/min.

The diameter of the ball is 6.25 mm, and the accuracy error of the measuring device does not exceed 3% when the specimen cracks and bursts.

4.3 The apparatus for measuring the distension of the specimen shall be calibrated to

an accuracy of 0.1 mm, with an error not exceeding 0.05 mm within the measuring range.

The distension of the specimen can be calculated by the distance the clamp and the steel

ball move relative to each other. The direction of the steel ball's movement is perpendicular to the surface of the test specimen. The force reading is zero when the steel ball just contacts the specimen's flesh side, which serves as the starting point for the relative movement between the steel ball and the clamp. The reduction in specimen thickness caused by the pressure from the steel ball is not calculated.

5.1 Sampling

It shall be conducted in accordance with the provisions of QB/T 2706-2005.

5.2 Sample preparation

A specimen is cut from the grain side according to the specifications in QB/T 2707-

2005 and Figure 3.

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