

ICS 59.140.30

QB

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

QB/T 4198-2011

**Leather. Physical and mechanical tests. Determination of tear
load: Single edge tear
(English Translation)**

Issued on: June 15, 2011

Implemented on: October 1, 2011

Issued by: Ministry of Industry and Information Technology of PRC

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1 Scope

This standard specifies the method for the determination of the single edge tear load of leather.

This standard applies to all types of leather.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this standard.

QB/T 2706 Leather - Chemical physical and mechanical and fastness tests

- Sampling location (QB/T 2706-2005, ISO 2418:2002, MOD)

QB/T 2707 Leather - Physical and mechanical tests - Sample preparation and conditioning (QB/T 2707-2005, ISO 2419:2002, MOD)

QB/T 2709 Leather - Physical and mechanical tests - Determination of thickness (QB/T 2709-2005, ISO 2589:2002, MOD)

3 Principle

The rectangular specimen is torn apart, from the cut on the short side. Record the load value generated during the tearing process of the specimen. Calculate the average value.

Note: This standard method is sometimes referred to as trouser-shaped tear.

4.1 Tensile testing machine

The tensile testing machine shall meet the following requirements:

Take sample according to the requirements of QB/T 2706.

5.2 Preparation of specimen

Prepare the specimen according to the provisions of QB/T 2707. Use a die cutter (4.3) to cut 6 specimens from the grain surface, wherein the long sides of 3 specimens are parallel to the ridge line, the long sides of the other 3 specimens are perpendicular to the ridge line.

5.3 Air conditioning of specimen

Carry out the air conditioning of the specimen, according to the provisions of QB/T 2707.

5.4 Determination of specimen thickness

Measure the thickness of the specimen, according to the provisions of QB/T 2709.

6.1 Adjust the distance between the clamps of the tensile testing machine, so

that the distance between the upper and lower clamps is 50 mm.

6.2 In the lower clamp of the tensile testing machine, clamp one side of the specimen's cut, for about 20 mm. Fold the other side of the specimen's cut for

180°; then clamp it in the upper clamp, to ensure that the long side of the specimen is parallel to the tensile direction of the tensile testing machine.

6.3 Start the tensile testing machine, until the specimen breaks. Record the

load-distance diagram

6.4 Repeat the procedures 6.2 ~ 6.3, to test other specimens.

7 Representation of results

7.1

The tear load of the specimen is the arithmetic mean of the load values on the load-distance diagram, which is calculated as follows:

Divide the load-distance diagram into four equal portions, from the first peak to the last peak. The first and last portions are not used to calculate the average value of the load. The

tear load is calculated from the arithmetic average of the peak and valley values, in the middle two portions, in the unit of Newton (N).

The peak or valley suitable for calculation shall have at least a 10% rise or fall.

- In electronic calculation, each maximum value (peak value) and each

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