

ICS 59.140.30

QB

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

QB/T 2714-2018

**Leather -- Physical and mechanical tests -- Determination of
flex resistance
(English Translation)**

Issued on: December 21, 2018

Implemented on: July 1, 2019

Issued by: Ministry of Industry and Information Technology

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Foreword

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

This standard is a revision of QB/T 2714-2005 "Leather - Physical and mechanical tests - Determination of flex resistance".

Compared with QB/T 2714-2005, the main technical changes in addition to editorial changes are as follows.

- In 4.1.1, ADJUST the description of the upper fixture; ADD the thickness requirements of its flat metal plate and EF platform plate, to be consistent with international standards;
- ADD "4.8 Round shaft", "4.9 Metal clip", "4.10 Stereo microscope" and related requirements, to be consistent with international standards;
- In 5.2, ADJUST the number of test specimens, to be consistent with international standards;
- In 6.5, ADD the number of folding in the wet test by 2500 times, to be consistent with international standards;
- In 6.6, ADD the evaluation method of crack strength and damage description method, to be consistent with international standards;
- ADD 6.10 Treatment method for only one test specimen showing slight

damage, to be consistent with international standards.

This standard adopts the redrafting method to modify and adopt ISO 5402-

1.2011 "Leather - Determination of flex resistance - Part 1.Flexometer method".

This international standard is based on the International Federation of Leather Craftsmen and Chemists (IULTCS) standard IUP 20, Part 1.

This standard has undergone the following technical changes when adopting 5402-1.2011 according to the actual situation in our country.

- In the normative references, RE-WRITE the originally quoted ISO standard to relevant Chinese standards;
- For ease of use, SPLIT the contents of 5.1 into 5.1 and 5.2; the subsequent clause number is changed accordingly;
- In order to prevent incorrect understanding of the standard in use, DELETE the reference "note" in 5.1;
- REMOVE the informative appendix A (Source of instruments).

Leather - Physical and mechanical tests -

Determination of flex resistance

1 Scope

This standard specifies the method for determining the flex resistance of dry or wet leather and leather coatings.

This standard applies to all types of leather which have a thickness of less than

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.

GB/T 6682 Water for analytical laboratory use - Specification and test methods (GB/T 6682-2008, ISO 3696.1987, MOD)

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 2707-2018, ISO 2419.2006, MOD)

3 Principle

The upper test face of the specimen is folded inwards and clamped in a movable fixture; the lower test face is folded outwards and clamped in a fixed fixture. The upper moving fixture moves the specimen. Evaluate the changes of the specimen after a specified number of times.

4.1 Flex resistance testing machine

The flex resistance testing machine shall include the components specified in

4.1.1 to 4.1.3.

It is performed according to the provisions of QB/T 2706.

5.2 Preparation of specimens

According to the provisions of QB/T 2707, use a die knife (4.2) to cut at least 4 specimens from the grain surface for testing. Among them, the long sides of at least 2 specimens are parallel to the ridge line; the long sides of at least 2 specimens are perpendicular to the ridge line.

5.3 Air conditioning of dry specimen

Dry specimens shall be air-conditioned in accordance with the provisions of QB/T 2707.

5.4 Preparation of wet specimen

Place the specimen in the glass dish (4.7). Add distilled or deionized water to the glass dish at a depth of not less than 10 mm. Put the glass dish in the dryer. Vacuum the dryer and maintain the vacuum degree at 4 kPa for 2 min. Then release. Repeat the process of vacuum and release twice. Take out the

specimen. Use absorbent paper to absorb excess water. Immediately conduct a wet test.

Note: The upper fixture cannot clamp a thicker specimen. In this case, the thickness of one end of the specimen can be thinned to 1.5 mm and this end is inserted into the upper fixture. Leather that is too hard shall not be tested using this method.

6.1 Open the upper and lower fixtures (4.1.1 and 4.1.2), so that the space in the fixture is at least twice the thickness of the specimen.

6.2 Start the motor so that the EF side of the upper fixtures (4.1.1) is parallel to the upper side of the lower fixtures [see Figure 2c)].

6.3 Fold the test surface of the specimen inwards so that the two long sides are together. Clamp the folded specimen [see Figure 2a)], so that the folded side is next to the lower side of the upper fixture; meanwhile one end is close to the tighten screw of the upper fixture.

6.4 Make the two corners of the specimen that are not clamped wrap the fixture outwards and downwards [see Figure 2b)], so that the two surfaces of the specimen in contact. Fix the free end of the specimen in the lower fixture [see Figure 2c)], meanwhile make it stretch vertically. The force used shall not exceed the force required to just tighten the leather.

6.5 The required number of flex resistance can be selected from the following

The damage descriptions shall include the following.

- Change in color of the coating when there is no damage;
- Cracks in the coating, as well as the tendency of the cracks to extend to one or more coatings; if possible, the number of cracks shall be recorded;
- Abnormal changes in the adhesion of the leather coating;
- Abnormal changes in adhesion between the two coatings;
- The powdering or flaking conditions of coating;
- The color contrast of cracks, powder or flakes on the coating.