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QB

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

QB/T 2727-2017

**Leather - Tests for color fastness - Color fastness to artificial
light: xenon art fading lamp test**

皮革色牢度试验耐人造光色牢度氙弧

(English Translation)

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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 2727-2005 "Leather - Tests for color fastness - Color fastness to artificial light. xenon art fading lamp test".

Compared with QB/T 2727-2005, the main technical changes of this Standard except for editorial changes are as follows.

- ADJUST the standard name to "Leather - Tests for color fastness - Color fastness to artificial light. xenon art fading lamp test";
- REVISE "Normative references". CANCEL the year number of references to make the references the latest version, and ADD GB/T 6682 "Water for analytical laboratory use - Specification and test methods";
- REVISE the description of "Principle";
- REVISE the description of water-cooled xenon arc lamp in "Equipment";
- ADD the black plate thermometer to the temperature sensor in "Equipment";
- REFINE the description of "Sample";
- ADD "Exposure conditions";

- REFINE "Exposure methods";
- GIVE more detailed description of the evaluation of color fastness to light.

This Standard was proposed by China National Light Industry Council.

This Standard shall be under the jurisdiction of National Technical Committee on Leather Industry of Standardization Administration of China (SAC/TC 252).

Drafting organizations of this Standard. State Center of Supervision and test for Leather (Zhejiang), Zhejiang Mingxin Xuteng Leather Co., Ltd., China Leather and Footwear Industry Research Institute, China Institute of Metrology, Zhejiang Institute of Quality Inspection Science

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The previous released version replaced by this Standard is as follows.

- QB/T 2727-2005.

Leather - Tests for color fastness - Color fastness to artificial light. xenon art fading lamp test

1 Scope

This Standard specifies the test methods for the color of leather to resist artificial light sources and heat.

This Standard applies to all kinds of leather that require light resistance and high temperature resistance.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 250 Textiles - Tests for colour fastness - Grey scale for assessing change in colour

GB/T 730 Textiles - Tests for colour fastness - Quality control of blue wool

reference materials 1 to 7

GB/T 6682 Water for analytical laboratory use - Specification and test methods

3 Principle

Under artificial light sources, expose the sample with blue wool reference materials according to the specified conditions.

4.2.1 Xenon arc lamp light resistance testing machine (air-cooled or water-cooled)

The sample and the blue wool reference materials can be exposed in any of the following equipment (see 4.2.1.1 and 4.2.1.2) at the same time. The light source is a xenon arc lamp. The difference in light intensity on the light receiving surface of the sample and the blue wool reference materials shall not exceed $\pm 10\%$ of the average value.

4.2.1.2 Water-cooled xenon arc lamp light resistance testing machine

Water-cooled xenon arc lamp light resistance testing machine shall meet the following conditions.

4.2.2.1 Black plate thermometer (BPT), including a metal plate with a size of at

least 45 mm x 100 mm. The temperature is measured by a temperature measuring device, and the thermal measurement point is located in the center of the metal plate. The side of the metal plate facing the light source is black, so that the reflectivity of the light reaching the sample on the blackboard is less than 5 %.

4.2.2.2 Black scale thermometer (BST), including a stainless steel plate with a

size of about 70 mm x 30 mm, a thickness of about 0.5 mm. The temperature is measured by a temperature measuring device.

4.2.2.3 Irradiance monitor. Since the irradiance of the sample surface changes as a function of the xenon lamp, light intensity and the distance from the xenon lamp to the sample, the consistency of exposure shall be controlled by the irradiance monitor.

5.1 The size of the sample shall meet the size of the sample holder that comes with the instrument. The size of the sample varies with the number of samples and the size and shape of the sample holder provided by the instrument. One sample holder can be used to test one sample or a set of samples.

5.3 In water-cooled equipment, the sample clip should be placed the sample of about 70 mm x 120 mm. The blue wool reference materials shall be placed on the white paper card backing for exposure. If necessary, the sample can also be placed on the white paper card.

5.4 The size and shape of the sample shall be the same as the blue wool reference materials, so as to avoid errors of higher ratings in comparing the sample with a larger area to the blue wool reference with a smaller area when visually rating the exposed and unexposed parts.

6 Exposure conditions

Choose appropriate exposure conditions according to different products or different technical requirements.

7.1 CHECK whether the equipment is in good operating condition and whether clean, effective xenon arc lamps are installed.

7.2 PLACE the sample clip containing the sample on the sample holder in the equipment. The empty space on the sample holder shall be filled with the sample clip equipped with a white hard card.