

Translated English of Chinese Standard: QB/T1873-2010

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

**QB/T 1873-2010**

Replacing QB/T 1873-2004

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**Shoe upper leather**  
**鞋面用皮革**

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## Foreword

This Standard is a revision of QB/T 1873 - 2004 *Shoe Upper Leather*.

This standard, in comparison with QB/T 1873-2004, has the major changes as follows:

- Adjust “scope”;
- Add standards for reference in "normative reference documents”;
- Adjust the thickness range in "product classification”;
- Add requirements for "limit of harmful substances", to be consistent with GB 20400-2006;
- Replace the "tear load" with the "tear load”;
- Adjust requirements for "specified load elongation" and "bursting height”;
- Adjust and refine the requirements for "coating folding endurance" and "bursting strength". And add requirements for "split leather”;
- Add requirements for "internal surface of unlined shoe upper leather" in "color fastness to rubbing”;
- Add requirements for "odor”;
- Add requirements for "shrink temperature" of non-chrome tanning shoe’s upper leather;
- Simplify the requirements for "ex-factory inspection”;
- Modify the "determination rules for single (piece) leather”.

This Standard was proposed by China National Light Industry Council.

This Standard shall be centralized by the National Leather Industry Standardization Technical Committee (SAC/TC 252).

Drafting organization of this Standard: Fengan Leather Co., Ltd.

The main drafters of this Standard: Chen Ronghui, and Chen Rongsheng.

This Standard was first issued in 1993. And this is the second version.

From the date of implementation, this Standard shall replace the previous light industry standard QB/T 1873-2004 *Shoe Upper Leather*.

# Shoe upper leather

## 1 Scope

This Standard specifies the products classification, requirements, grading, test methods, inspection rules, package, mark, transportation and storage of the shoe upper leather.

This Standard applies to all kinds of shoe upper leather. Leather for bags can also refer to this Standard.

This Standard does not apply to shift membrane leather.

## 2 Normative references

The articles contained in the following documents have become part of this Standard when they are quoted herein. For the dated documents so quoted, all the modifications (Including all corrections) or revisions made thereafter shall be applicable to this Standard.

GB/T 19941 Leather and fur -- Chemical tests-Determination of formaldehyde content (GB/T 19941-2005, ISO/TS 17226:2003,MOD)

GB/T 19942 Leather and fur -- Chemical tests -- Determination of banned azo colourants (GB/T 19942-2005, ISO/TS 17234:2003,MOD)

GB 20400 Leather and fur-Limit of harmful matter

QB/T 2537 Leather -- Tests for colour fastness -- Colour fastness to cycles of to-and-fro rubbing (QB/T 2537-2001, eqv ISO 11640:1993)

QB/T 2710 Leather -- Physical and mechanical tests -- Determination of tensile strength and percentage extension (QB/T 2710-2005, MOD ISO 3376:2002)

QB/T 2711 Leather -- Physical and mechanical tests -- Determination of tear load -- Double edge tear (QB/T 2711-2005, MOD ISO 3377-2:2002)

QB/T 2712 Leather -- Physical and mechanical tests -- Determination of distension and strength of grain -- Ball burst test (QB/T 2712-2005, MOD ISO 3379:2002)

QB/T 2713 Leather -- Physical and mechanical tests -- Determination of shrinkage temperature (QB/T 2713-2005, MOD ISO 3380:2002)

QB/T 2714 Leather -- Physical and mechanical tests -- Determination of flex resistance (QB/T 2714-2005, MOD ISO 5402:2002)

QB/T 2724 Leather -- chemical test -- Determination of ph (QB/T 2724-2005, MOD ISO 4045:1977)

QB/T 2725 Leather -- Determination of odour

QB/T 2801 Leather -- The rules of examination for acceptance packing marking transportation and conservation

### 3 Product classification

3.1 See Table 1 for the product classification. And the classification of each type of leather includes the sectional-layer leather of its kind.

**Table 1 Classification**

| Category      | Cattle, horse, mule leathers | Pig leather | Sheep leather | Other leathers |
|---------------|------------------------------|-------------|---------------|----------------|
| Thickness /mm | Type I                       | >1.5        | >0.9          | >1.5           |
|               | Type II                      | 1.3-1.5     | 0.6-0.9       | 1.0-1.5        |
|               | Type III                     | <1.3        | <0.6          | <1.0           |

### 4 Requirements

#### 4.1 Limit of harmful substances

It shall comply with provisions indicated in GB 20100 and Table 2.

**Table 2 Limit value of harmful substances**

| Items                                                                                                                                                                                                                                                                   | Limit value                   |                                                       |                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------------------------------|---------------------------------------------------------|
|                                                                                                                                                                                                                                                                         | Class A<br>(Infants' product) | Class B<br>(Products in direct contact with the skin) | Class C<br>(Products in indirect contact with the skin) |
| Decomposable harmful aromatic amine dyes / (mg/kg)                                                                                                                                                                                                                      | ≤30                           |                                                       |                                                         |
| Free formaldehyde (mg/kg)                                                                                                                                                                                                                                               | ≤20                           | ≤75                                                   | ≤300                                                    |
| Note: See GB 20100 for names of banned aromatic amines. If the content of 4-aminobiphenyl and (or) 2-naphthylamine exceeds 30 mg/kg, and there is no other evidence, it still can not be concluded that the banned azo dye is used, with existing scientific knowledge. |                               |                                                       |                                                         |

#### 4.2 Physiochemical property indexes

It shall comply with provisions indicated in Table 3.

leather; 500g for suede leather, and internal surface of unlined shoe's upper leather. 50 times for dry rubbing; and 10 times for wet rubbing.

## **6.8 Odor**

Determine according to the provisions of QB/T 2725.

## **6.9 Shrink temperature**

Determine according to the provisions of QB/T 2713.

## **6.10 pH and dilution difference**

Determine according to the provisions of QB/T 27124.

## **6.11 Sensory requirements**

Under the suitable light, choose the clear sight distance to conduct sensory inspection.

# **7 Inspection rules**

## **7.1 Batch-group**

The products of the same variety, produced by the same type of raw material and same process shall consist as an inspection batch.

## **7.2 Ex-factory inspection**

Products must be inspected; passing the inspection; and attached with certificate; before leaving the factory.

## **7.3 Type inspection**

### **7.3.1 Inspection cycle**

Type inspection shall be conducted if there is one of the following conditions.

- a) When the raw materials, process or chemical materials have significant changes;
- b) When the production is resumed after a long-term shutdown (six months);
- c) When the national quality and supervision agency puts forward requirements for type inspection;
- d) During the normal production, type inspection shall be conducted semiannually;

### **7.3.2 Sampling quantity**

Randomly choose 3 sheets (pieces) for inspection from the products passing the

inspection.

### **7.3.3 Qualified determination**

#### **7.3.3.1 Decision rules for single sheet (piece)**

- If one of the banned azo dye, free formaldehyde, tear load, coating folding endurance, bursting height, colour fastness to rubbing and odor is unqualified; or crack surface, crazing and other defects occurs and affects the use function, then the sheet (piece) is judged as unqualified;
- If accumulative two items of the specified load elongation, bursting strength, shrink temperature, pH, and pH dilution difference are unqualified, then the sheet (piece) is judged as unqualified;
- If one item of the specified load elongation, bursting strength, shrink temperature, pH, and pH dilution difference is unqualified; and there are accumulative two items of sensory requirements that are unqualified, the sheet (piece) is judged as unqualified;
- When the limit of harmful substances and physiochemical property indexes are all qualified; and more than 3 items of sensory requirements are unqualified, then the sheet (piece) is judged as unqualified.

#### **7.3.3.2 Decision rules for the whole batch**

In three sheets (pieces) of test samples, if all the three samples are qualified, then the batch of the products is judged as qualified. If one sheet (piece) or more than one are unqualified, then double sampling 6 sheets (pieces) for re-inspection. If one sheet (piece) or more than one are unqualified in the six sheets (pieces), then the batch of the products is judged unqualified.

## **8 Mark, package, transportation and storage**

The mark, package, transportation and storage shall be in accordance with the provisions of QB/T 2801.

\_\_\_\_\_ **END** \_\_\_\_\_

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