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**QB**

LIGHT INDUSTRY STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA

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**QB/T 4556-2023**

Replacing QB/T 4556-2013

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**Snow boots**

雪地靴

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## Foreword

This document was drafted in accordance with the provisions of GB/T 1.1-2020 "Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents".

This document replaces QB/T 4556-2013 "Snow boots". Compared with QB/T 4556-2013, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- a) CHANGE the scope (see Chapter 1; Chapter 1 of the 2013 edition);
- b) DELETE the classification of snow boots by upper materials (see 4.1 of the 2013 edition);
- c) DELETE the requirements for shoe materials (5.1.3 of the 2013 edition);
- d) CHANGE the "Sensory quality" requirements (see 5.2; 5.2 of the 2013 edition);
- e) CHANGE the "Peel strength" requirements (see 5.3.1; 5.3.1 of the 2013 edition);
- f) CHANGE the "Folding resistance" requirements (see 5.3.2; 5.3.2 of the 2013 edition);
- g) ADD the requirements and test methods for "Low temperature folding resistance of soles" (see 5.3.5 and 7.6);
- h) CHANGE the requirements and test methods for "Friction color fastness of lining and insole" (see 5.3.6 and 7.7; 5.3.5 and 7.6 of the 2013 edition);
- i) DELETE the requirements and related test methods for "Limited substances" (see 5.4; 7.10 and 7.11 of the 2013 edition);
- j) CHANGE the test method for "Wear resistance" (see 7.4; 7.4 of the 2013 edition);
- k) CHANGE the test method for "Cold resistance" (see 7.8; 7.7 of the 2013 edition);
- l) DELETE the inspection items (see 8.1 of the 2013 edition);
- m) CHANGE the judgment method (see Chapter 8; 8.2 of the 2013 edition).

This document was proposed by China Light Industry Federation.

This document shall be under the jurisdiction of the National Technical Committee for Footwear Standardization (SAC/TC 305).

The drafting organizations of this document: Jiaozuo Longfeng Fur Enterprise Co., Ltd.,

# Snow boots

## 1 Scope

This document specifies the requirements for the identification, sensory quality, physical and mechanical properties, odor, after-sales quality judgment of snow boots; describes the corresponding test methods; specifies the content of qualification judgment, inspection rules, packaging, transportation, storage; provides product classification for technical provisions.

This document applies to the production, inspection, sales of snow boots for daily wear. The production, inspection, sales of other footwear products with warmth retention functions refer to this document.

## 2 Normative references

The contents of the following documents constitute the essential terms of this document through normative references in the text. Among them, for dated references, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies to this document.

GB/T 251 Textiles - Tests for color fastness - Grey scale for assessing staining

GB/T 2703 Footwear - Vocabulary

GB/T 3903.1 Footwear - Test methods for whole shoe - Flexing resistance

GB/T 3903.2 Footwear - Test methods for whole shoe - Abrasion resistance

GB/T 3903.3 Footwear - General test methods - Peeling strength

GB/T 3903.5 Footwear - General test methods - Appearance quality

GB/T 3903.6 Footwear - Test methods for whole shoe - Slip resistance performance

GB/T 4841.3 Color cards of standard depths for dyeing with dyestuffs 2/1, 1/3, 1/6, 1/12, 1/25

GB/T 21284-2015 Footwear - Test methods for whole shoe - Thermal insulation

HG/T 2876-2009 Cellular material for rubber-plastics shoes - Determination of compression set

QB/T 1187 Footwear - Principle of inspection and marking, package, transportation, storage

QB/T 2224-2012 Footwear - Performance requirement for uppers low-temperature flexing resistance

QB/T 2673 Labeling for footwear product

QB/T 2882-2023 Footwear - Test methods for uppers, linings and insoles - Color fastness to rubbing and bleeding

QB/T 4886-2015 Footwear - Performance requirement for sole flexing resistance at low-temperature

### 3 Terms and definitions

The terms and definitions defined in GB/T 2703, as well as the following terms and definitions, apply to this document.

#### 3.1

##### **Subsidiary parts**

Generally, the inner side and rear part of the upper.

[Source: GB/T 2703-2017, 2.3.2, modified]

#### 3.2

##### **Snow boots**

Shoes with a certain warmth-keeping function, whose uppers are made of leather and fur or leather combined with wool or other materials such as blended materials.

[Source: GB/T 2703-2017, 2.2.43, modified]

#### 3.3

##### **Infants' snow boots**

Snow boots with a shoe size not exceeding 170, generally suitable for infants and young children aged 3 and below (3.2).

#### 3.4

##### **Children's snow boots**

Snow boots with a shoe size greater than 170, generally suitable for children aged 3

The length of the wear mark shall not exceed 15.0 mm.

#### **5.3.4 Low-temperature folding resistance of the upper surface material**

The low-temperature folding resistance of the upper surface material shall meet the requirements of QB/T 2224-2012 for qualified products.

#### **5.3.5 Low-temperature folding resistance of the sole**

The low-temperature folding resistance of the sole shall meet the requirements of QB/T 4886-2015 for qualified products.

#### **5.3.6 Friction color fastness of lining and insole**

The staining shall not be less than level 2 ~ 3 (dark fur and dark artificial fur shall not be less than level 2).

#### **5.3.7 Cold resistance**

Within 30 minutes, the temperature of the inner cavity of the shoe shall not drop by more than 10 °C.

#### **5.3.8 Anti-slip performance**

The wet dynamic friction coefficient shall not be less than 0.30.

#### **5.3.9 Microporous bottom compression deformation**

The single-layer microporous bottom compression deformation of a single density shall be not more than 30%.

### **5.4 Odor**

The odor level of infants' snow boots and children's snow boots shall be not more than level 2.

## **6 After-sales quality judgment**

See Appendix A for after-sales quality judgment.

## **7 Test method**

### **7.1 Sensory quality**

Test according to GB/T 3903.5.

### **7.2 Peel strength**

Test according to GB/T 3903.3, using a blade width of  $(10 \pm 0.2)$  mm. Measure the toe or heel during the test. When the toe and heel cannot be peeled, test the side of the shoe instead. If both cannot be tested, do not perform this item.

### **7.3 Folding resistance**

Test according to GB/T 3903.1, without cutting; perform 40000 folds continuously.

### **7.4 Wear resistance**

Tested in accordance with GB/T 3903.2. When testing the wear resistance of the outer sole of the foam material of children's snow boots, the surface dense layer is not polished. If the flat area does not meet the test requirements, no test is performed.

### **7.5 Low-temperature folding resistance of upper materials**

Tested in accordance with QB/T 2224-2012. If the specimen area does not meet the sampling requirements, materials from the same batch can be tested.

### **7.6 Low-temperature folding resistance of soles**

Tested in accordance with QB/T 4886-2015.

### **7.7 Friction color fastness of lining and insole**

**7.7.1** Take lining and insole materials as specimens. If there is no lining, the contact surface between the upper and the foot is tested as the lining. If the specimen area does not meet the sampling requirements, materials from the same batch can be tested.

**7.7.2** Fur and artificial fur shall be tested according to method C in QB/T 2882-2023, wet rubbed 10 times; according to the provisions of GB/T 4841.3, the color darker than 1/12 of the standard depth of dyeing shall be considered dark. Other materials shall be tested according to method A in QB/T 2882-2023, wet rubbed 50 times. The gray scale shall comply with the provisions of GB/T 251.

### **7.8 Cold resistance**

The cold insulation test shall be carried out according to GB/T 21284-2015; the test results of the left and right feet of the same pair of shoes shall be expressed separately.

### **7.9 Anti-slip performance**

The test shall be carried out according to GB/T 3903.6; the medium shall be grade 3 water; the interface shall be ceramic tile; the test mode shall be horizontal mode; the result shall be the wet dynamic friction coefficient of the specimen; the lower value of the left and right feet of the same pair of shoes shall be taken as the final result.

### **7.10 Microporous bottom compression deformation**

## Appendix A

### (Informative)

#### After-sales quality assessment

##### A.1 After-sales service period

It can be determined by the enterprise according to the product grade, in accordance with the national or local three-guarantee policy, meanwhile clearly stated in the after-sales service provisions.

##### A.2 After-sales quality judgment

In the case of normal wear within the after-sales service period, the following problems can be judged as quality problems:

- a) Failure to meet the quality requirements specified in this document;
- b) Upper cracks, upper foot breakage, severe white frost, discoloration, front upper coating falling off;
- c) Open thread and open glue;
- d) Main heel or toe cap deformation;
- e) Heel deformation, cracks, breakage or fall off, heel fall off;
- f) Lining and insole obvious discoloration contaminate socks, lining and insole wear;
- g) Outsole or insole cracks, breakage or unevenness, affecting wear;
- h) Waist strips are open-glued or broken;
- i) Protruding nail tips (heads) inside the shoe, uneven inside the shoe, affecting wear;
- j) Upper decorations fall off;
- k) Other defects or quality problems that affect wear.

##### A.3 Inspection method

**A.3.1** If the quality requirements specified in this document are not met, the inspection method specified in this document shall be used. The sensory inspection shall be carried out in accordance with the provisions of GB/T 3903.5.

**A.3.2** Decolorization: Use white absorbent cotton or gauze soaked with clean water (no water dripping when pressed by fingers) to rub the inner side of the upper surface 10



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