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## Directions for use and labels for carpets

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# Introduction

**Chapter 5 of the standard is compulsory, and the others are recommended.**

The standard is based on the stipulations of ISO/IEC No.37 Guide *Instructions for Use of Products of Consumer Interest* and GB 5296.1 *Instructions for Use of Products of Consumer Interest - General Principles,* and prescribes the directions for use and labels for pile carpets for the first time.

In preparing the standard, ISO 6347: 2004 *Textile floor coverings - Consumer information* has been taken for reference; the European Standard EN 1307: 2005 *Textile floor coverings - Classification of pile carpets* and EN 14215: 2003 *Textile floor coverings - Classification of machine-made pile rugs and runners,* and CEN TC 134 *Textile floor coverings – The use for labels related to classification - Application cases* has been taken for reference when Annex A Classification and Assessment of Pile Carpets in the standard is formulated; part of label examples are given in Annexes D and E, adding workability to this standard.

The standard will replace QB2397—2008 since the enforced date.
The Annexes A, B and C are normative, and Annexes D and E are informative.
This standard is put forward by the China National Light Industry Council.
This standard is under the jurisdiction of the China Carpet Standardization Technical Committee.
The major drafting organization of the standard is the Carpet Industry Association under China Arts and Crafts Association.
The participating drafting organization of the standard is the Tianjin Oriental Sapphire (Dongfang Lanbao) Carpet Research Centre.
The major drafters of the standard include Zhang Yufen, Li Xiaowen, Chen Guisheng, Liu Chang and Zhao Yao.

# Directions for use and labels for carpets

## 1. Scope

This standard prescribes the basic principles and requirements for the directions for use and labels for carpets.

The standard is applicable to the carpet products sold within the territory of the People's Republic of China. It is not applicable to the class of carpet pads.

## 2. Normative references

The provisions in the following references have been referred by this standard and become part of this standard. For dated references, all of their following amendments (excluding the errors correction) or revised versions are inapplicable. However, the parties who have reached an agreement according to this standard are encouraged to discuss whether the latest edition of these references can be adopted. For undated references, their latest editions are applicable to this standard.

GB 5296.1—1997 Instructions for Use of Products of Consumer Interest - General Principles

GB/T 15964 Carpets - Determination of number of tufts or loops per unit length and per unit area (GB/T 15964—2008，ISO 1763：1986，MOD)

GB/T 15965 Handmade carpets - Determination of length of pile (GB/T 15965—2008，ISO 2549：1972，NEQ)

QB/T 1089 Determination of thickness of machine-made carpets (QB/T 1089-2001, eqv ISO 1765:1986)

QB/T 1188 Determination of carpet weight (QB/T 1188-2001, eqv ISO 8543:1998)

QB/T 1555 Determination of thickness of pile over the substrate (QB/T 1555-2001, eqv ISO 1766:1999)

QB/T 2998 Mass loss of carpets – Determination of mass loss using Lisson-Tretrad tests (QB/T 2998-2008，eqv ISO 12951：1999）

FZ/T 01053 Textiles - Designation of fibre content (FZ/T 01053-2007)

ISO 9405 Textile floor coverings - Assessment of changes in appearance（ISO 9405：2001）

ISO 10361 Textile floor coverings - Production of changes in appearance by means of a Vettermann drum and hexapod tumbler tester (ISO 10361: 2000)

## 3. Terms and Definition

The following terms and definition are applicable to this standard.

3.1. Instruction for Use

It’s an informative tool telling the consumers how to use the products correctly and safely. It is often expressed in forms of instructions, tags or labels.

3.2. Carpet Type

Types divided by the different thickness of pile and the weight of pile per unit area for pile carpets. Corresponding assessment method can be applied to each type.

3.3. Use Classification

Applicability classification divided by the different use strength (abrasion resistance, appearance retention, etc.) that the carpets can withstand. Carpets can be classified into household and commercial ones, each subdivided into three classes respectively.

3.4. Luxury rating

Classification determined by the luxury factor ($C_F$), and measured according to the weight and density of the pile of the carpets or the method in Annex C.

## 4. Basic Principles

4.1. The directions for use are an integral part of delivered products.

4.2. All the contents in the directions for use shall accord with the stipulations of relevant national laws and regulations.

4.3. The instruction for use shall introduce products according to the facts.

## 5. The contents of the Instruction for Use

5.1. The name and address of the manufacturer

The name and address which the manufacturer of carpet products registers in accordance with the law shall be indicated.

For imported carpets, the place of origin (country or region), and the agent's, importer's or distributor's names and addresses registered within China in accordance with the law shall be indicated in Chinese.

5.2. Name of products

The name of products shall indicate the real attributes of the products and meet the following requirements:

a) If national standards or industrial standards prescribe product name, the name prescribed by related standards shall be adopted.

b) If national standards or industrial standards have not prescribed the name of products, a common or popular name that will not mislead consumers or make them confused shall be adopted.

5.3. Sizes and specifications

The length and width sizes shall be indicated for carpet tiles, and breadth size for fitted carpet.

5.4. Name and content of pile fibre on the carpet

The name and content for composition of pile fibre on the carpet shall be indicated. The indication of the fibre content shall comply with the prescription of FZ/T 01053.

5.5. Total thickness (mm) of the carpets and the thickness (mm) or height (mm) of the piles over the substrate

Total thickness of the carpets shall be determined according to QB/T 1089, and the thickness of the piles over the substrate shall be determined according to QB/T 1555. Length of piles of the handmade carpets shall be determined according to QB/T 15965—2008.

5.6. Total Weight per Unit Area ($g/m^2$)

The total weight per unit area of machine-made carpets shall be determined according to QB/T 1188.

5.7. Pile weight per unit area over the substrate ($g/m^2$)

The pile weight per unit area over the substrate of machine-made carpets shall be determined according to QB/T 1188. Tufting line number or stitches may be indicated for handmade carpets.

5.8. Product standard number

The number of the national standard, industrial standard or enterprise standard enforced on products shall be indicated.

5.9. Product quality grade

For the products whose quality grade has been clearly defined in the product standard, the product quality grade shall be indicated according to the stipulations of the product standard.

5.10. Inspection certificate of product quality

For the qualified product manufactured in China, each single product (selling unit) shall be attached with a delivery inspection certificate. The date of production and batch number shall also be indicated.

## 6. Directions for Use and labels for Carpets

6.1. Classification direction and labels for applicable carpeting locations

For machine-made pile carpets, classification direction or labels shall be provided to indicate the most applicable carpeting areas (locations). See Annexes A and B for the classifying methods and calculation. See Annex C for abrasion index calculation and luxury class, and Annex D for use classification and luxury class labels.

6.2. Additional (optional) informative direction and labels

If the products have been provided with other physical properties by being processed with special techniques, indication may be adopted or corresponding labels may be selected. The testing method and achieved technical level shall also be indicated. See Annex E for examples of corresponding labels.

## 7. Forms and Requirements for Directions for Use

7.1. Applicable forms

a) The directions for use or labels shall be stitched, stuck on or attached to the carpet products;

b) Directly printed on the package of the products;

c) Provided together with the products.

7.2. Basic requirements

7.2.1. The characters on the directions for use or labels shall be clear and striking. The colour of characters and graphic symbols shall be in contrast to the background colour or base colour.

7.2.2. The characters on the directions for use or labels shall be standard Chinese characters defined by China. Pinyin, foreign languages or minority languages can be used at the same time, but the size of such characters shall be no larger than that of the corresponding Chinese characters.

7.2.3. The directions for use or labels shall be made of suitable materials and with proper methods to keep them clear and easy to read during the selling period of the products.

7.2.4. Pile carpet products that are assessed on the use classification and luxury rating shall comply with the other technical requirements of their respective product standard.

7.2.5. The labels for use classification and luxury rating shall be used together.

# Annex A

(Normative Annex)

Assessment on Use Classification for Pile Carpets

## A.1 General Principles

The assessment on use classification is designed to protect consumers' rights and interests by applying this standard, and provide direction to consumers to let them choose and purchase the pile carpet products with applicable classification to be laid in the specific locations.

## A.2 Assessment on use classification for pile carpets

Pile carpets can be divided into the following types by its use:

a) Fitted pile carpets (includes modular carpets);

b) Pile carpet tiles and carpet strip.

### A.2.1 Assessment on use classification and luxury rating for fitted pile carpets

The use classification for fitted pile carpets is based on the applicability in use and can be grouped into household and commercial, each subdivided into three classes respectively. The applicability of the use-strength of carpets (resistance to light tramping frequency, resistance to moderate tramping frequency, resistance to generally heavy tramping frequency, resistance to heavy tramping frequency, resistance to ultra-heavy tramping frequency) shall be determined according to the tests for abrasion resistance (mass loss) of the products and appearance retention (appearance change) of carpet surface.

The total use classification shall be determined by the testing class of two single items (namely the abrasion resistance and appearance retention), whichever is lower.

The luxury rating (walking comfort degree) shall be calculated according to the testing results.

#### A.2.1.1 Classification for fitted pile carpets (see Table A.1)

Fitted pile carpets can be divided into two types in terms of the pile thickness and pile weight per unit area over the substrate, so as to test and assess the use classification according to different classifications.

**Table A.1 Classification for fitted pile carpets**

| Pile thickness above the substrate Mm | Pile weight per unit area over the substrate (spw) g/m$^2$ | | |
|---|---|---|---|
| | spw＜600 | 600≤spw＜900 | spw≥900 |
| ＜6 | Class I | | Class II |
| ≥6 | Class I | Class II | |

#### A.2.1.2 Technical requirements for use classification of fitted pile carpets (see Table A.2)

Applicability classification of the pile carpets is determined in terms of the two technical indicators of use strength: abrasion resistance and appearance retention of carpet surface.

a) Classification of abrasion resistance

— Classification of abrasion resistance for Class I carpets shall be tested by using the QB/T 2998 method and the abrasion factor ($I_{TR}$) of the results of Lisson-Tretrad tests shall be calculated according to the Formula B.1.

— Classification of abrasion resistance for Class II carpets, the abrasion factor ($W_1$) shall be calculated according to Annex C.

b) Classification of appearance retention

— The appearance retention shall be tested according to ISO 10361 by using the hexapod tumbler, and assessed according to ISO 9405.

**Table A.2 Technical requirements for use classification of fitted pile carpets**

| Purpose | Use Strength | Use classification | Classification of Abrasion | | Classification of appearance Retention | |
|---|---|---|---|---|---|---|
| | | | Class I Carpets $I_{TR}$ | Abrasion Index ($W_1$) of Class II Carpets | Class I Carpets and < 80% Woollen Carpets | Class II Carpets and ≥80% Woollen Carpets |
| | | | | | Hexapod Tumbler Test 12000r (Class) | Hexapod Tumbler Test 12000r (Class) |
| For Domestic Use | Light Walking Frequency | 1 | ≥0.9 | ≥0.8 | 1.5 | 1.5 |
| | Moderate Walking Frequency | 2 | ≥1.7 | ≥1.7 | 2 | 2 |
| | Heavy Walking Frequency | 3 | ≥2.3 | ≥2.5 | 2.5 | 2.5 |
| For Commercial Use | Generally Heavy Walking Frequency | I | ≥2.3 | ≥2.5 | 2.5 | 2.5 |
| | Heavy Walking Frequency | II | ≥3.0 | ≥2.5 | 3 | 2.5 |
| | Ultra-heavy Walking Frequency | III | ≥3.0 | ≥3.3 | 3.5 | 3 |

**A.2.1.3 Technical requirements for luxury rating for fitted pile carpets (see Table A.3)**

In assessing luxury rating, the luxury rating factor $C_F$ shall be calculated according to Annex C and the rating shall be assessed according to Option I in Table A.3 or the pile weight listed in Option II listed in Table A.3.

**Table A.3 Technical requirements for luxury rating of fitted pile carpets**

| Luxury Rating | Option I | Option II |
|---|---|---|
| | Luxury Factor $C_F$ | Pile weight per unit area over the substrate (spw) ($g/m^2$) |
| LC1 | $C_F$<12.0 | <400 |
| LC2 | 12.0≤$C_F$<24.0 | ≥400 |
| LC3 | 12.0≤$C_F$<36.0 | ≥600 |
| LC4 | 36.0≤$C_F$<72.0 | ≥800 |
| LC5 | $C_F$≥72.0 | ≥1000 |

**A.2.2 Assessment on the use classification and luxury rating for pile carpet tiles and carpet strips**

Pile carpet tiles and carpet strips are classified by application locations, frequency and luxury degree.

**A.2.2.1 Technical requirements for use classification for pile carpet tiles and carpet strips (see Table A.4)**

The application frequency of pile carpet tiles and carpet strips shall be classified according to the corresponding appearance retention in Table A.4. The appearance retention shall be tested according to ISO 10361 by using the hexapod tumbler, and assessed according to ISO 9405.

**Table A.4 Technical requirements for use classification for pile carpet tiles and carpet strips**

| Use Strength | Use Classification | Appearance Change after 12000r in Hexapod Tumbler Test/Class |
|---|---|---|
| Light Walking Frequency | 1 | 1.5 |
| Moderate Walking Frequency | 2 | 2 |
| Generally Heavy Walking Frequency | 3 | 3 |
| Heavy Walking Frequency | 4 | 3.5 |
| Ultra-heavy Walking Frequency | 5 | 4 |

### A.2.2.2 Technical requirements for luxury rating for pile carpet tiles and carpet strips (see Table A.5)

In assessing the luxury rating, the luxury rating factor $C_F$ shall be calculated according to Annex C and the rating shall be assessed according to the option I in Table A.5 or the pile weight listed in Option II in Table A.5.

**Table A.5 Technical requirements for luxury rating for pile carpet tiles and carpet strips**

| Luxury rating | Option I | Option II |
|---|---|---|
| | Luxury Factor $C_F$ | Pile weight per unit area over the substrate (spw) ($g/m^2$) |
| LC1 | $C_F$＜20.0 | ＜600 |
| LC2 | 20.0≤$C_F$＜36.0 | ≥600 |
| LC3 | 36.0≤$C_F$＜72.0 | ≥800 |
| LC4 | 72.0≤$C_F$＜100.0 | ≥1000 |
| LC5 | $C_F$≥100.0 | ≥1500 |

# Annex B

(Normative Annex)

The Calculation of $I_{TR}$ (Lisson-Tretrad test)

B.1 The abrasion factor ($\boldsymbol{I_{TR}}$) of the results of Lisson-Tretrad tests shall be calculated by using the formula in B.1.

$$I_{TR}=0.19\sqrt{spw}\times\frac{100-m_{rv}}{100} \quad \text{……(B.1)}$$

$I_{TR}$ = The abrasion factor of the results of Lisson-Tretrad tests

spw = The pile weight per unit area over the substrate measured according to QB/T 1188 ($g/m^2$)

$m_{rv}$ = relative mass loss measured according to QB/T 2998, %

B.2 Calculation of relative mass loss ($\mathbf{m_{rv}}$)

$$m_{rv}=\frac{m_v}{spw}\times 100 \quad \text{……(B.2)}$$

$m_v$ = the mass loss per unit area determined according to QB/T 2998, ($g/m^2$)

spw = the pile weight per unit area over the substrate determined according to QB/T 1188 ($g/m^2$).

B.3 Calculation of mass loss per unit area ($\mathbf{m_v}$)

$$m_v=\frac{m_1-m_2}{A} \quad \text{……(B.3)}$$

$m_1$ = the mass of the carpet sample before the Lisson-Tretrad test (g)

$m_2$ = the mass of the carpet sample after the Lisson-Tretrad test (g)

*A* = the testing area of the Lisson-Tretrad test. Multiply the width of the tretrad in Lisson-Tretrad test by the length of moving track of the tretrad, and the unit is $m^2$.

# Annex C

(Normative Annex)

The Calculation of Abrasion Factor ($W_1$) and Luxury Rating Factor ($C_F$)

C.1 The Abrasion Factor ($W_1$) is calculated according to Formula (C.1)

$$W_1 = \frac{spw \times spd}{f_f \times 18} \quad \text{……（C.1）}$$

spw = the pile weight per unit area over the substrate determined according to QB/T 1188 ($g/m^2$)
spd = the pile density per unit area over the substrate determined according to QB/T 1188, and the unit is $g/m^3$
$f_f$ = fibre factor, see Table C.1.

**Table C.1 Fibre Factor**

| Fibre | Fibre Factor |
|---|---|
| Polyamide filament | 1.0 |
| Polyamide staple fibre | 1.2 |
| Polypropylene filament | 1.2 |
| Polypropylene staple fibre | 1.4 |
| Polyester staple fibre | 1.6 |
| Acrylonitrile staple fibre | 1.8 |
| Wool | 1.9 |
| Cotton | 2.0 |
| Advanced viscose staple fibre | 2.2 |
| Advanced acrylonitrile staple fibre | 2.4 |
| Blended spinning | Pro rata |

C.2 See Formula (C.2) and (C.3) for the calculation of luxury rating factor

a) Cut-pile carpets or cut-loop combined pile carpets containing more than 2/3 of the cut piles:

$$C_F = \frac{spt}{5} \times \frac{spw}{100} \times \sqrt{\frac{Nz + 200}{100}} \quad \text{……（C.2）}$$

b) Loop-pile carpets

$$C_F = \frac{spt}{6} \times \frac{spw}{100} \times \sqrt{\frac{Nz + 200}{100}} \quad \text{……（C.3）}$$

$C_F$ = luxury factor
spt = mm
spw = the pile weight per unit area over the substrate determined according to QB/T 1188 ($g/m^2$)
*N*z = the number of tufts per square decimetre determined according to GB/T 15964.

# Annex D

(Informative Annex)

Examples of Use Classification and Labels for Luxury Rating

**D.1 See Table D.1 for label examples of use classification**

**Table D.1 Label Examples of Use Classification**

| Symbol on the labels | Class | Use Degree | Applicable Locations |
|---|---|---|---|
|  | 1 | Light tramping frequency (for domestic use) | Study room or bedroom with lower utilization rate |
|  | 2 | Moderate tramping frequency (for domestic use) | Living room or hall with larger people flow |
|  | 3 | Heavy tramping frequency (for domestic use) | Entrance hall or walkway with higher utilization rate |
|  | I | Light tramping frequency (for commercial use) | Guest room in hotels, reception room and office, etc. |
|  | II | Moderate tramping frequency (for commercial use) | Store, office or meeting room with larger people flow |
|  | II | Heavy tramping frequency (for commercial use) | Locations with higher utilization rate and larger people flow or entrance hall, walkway or lobby, etc. |

**D.2 See Table D.2 for examples of luxury rating labels.**

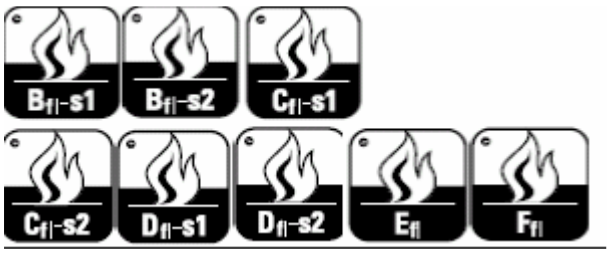
**Table D.2 Examples of Luxury Rating Labels**

| | | | |
|---|---|---|---|
|  | Luxury class (LC1) |  | Luxury class (LC4) |
|  | Luxury class (LC2) |  | Luxury class (LC5) |
|  | Luxury class (LC3) | | |

# Annex E
(Informative Annex)
Examples of Additional (Optional) Informative Labels

## E.1 Examples of labels for flame resistance
The flame resistance of the carpets shall be implemented according to GB 20286, and the class achieved in the test shall be indicated according to the labels in Table E.1

**E.1 Examples of labels for flame resistance**

| | |
|---|---|
|   | Flame Resistance |

## E.2 Examples of labels for anti-static property of the carpets
For the anti-static property of the carpets, the walking method test shall be performed according to ISO 6356 and electrical resistance determination shall be performed according to ISO 10965 (see Table E.2).

**Table E.2 Examples of labels for anti-static property**

| | | | |
|---|---|---|---|
|  | Electrical behaviour body voltage (walking method) ≤2kW or ≤3.5kW |   | Anti-static property of carpets (electrical resistance) |

## E.3 See Table E.3 for examples of other optional informative testing methods and labels

**Table E.3 Examples of other optional informative symbols**

| | | | |
|---|---|---|---|
|  | QB/T 2998 Resistance to fraying Mass loss ≤25% |  | QB/T 1088 Dimensional stability +0.4% ～-0.8% |
|  | ISO 4918 Castor chair occasional use |  | ISO 4918 Castor chair continuous use |
|  | ISO 13746 Stairs occasional use |  | ISO 13746 Stairs continuous use |
|   | ASTM F 609-05 BS EN 14041 Slip resistance (2 classes) | | |

## References

[1] GB 20286-2006 Requirements and mark on burning behaviour of fire retardant products and subassemblies in public place
[2] QB/T 2998-2008 Mass loss of carpets – Determination of mass loss using Lisson-Tretrad tests
[3] QB/T 1088—91 Determination of dimensional changes and distortion of carpets owing to effects of water immersion and heat drying
[4] ISO 6356：2000 Carpets – Assessment of static electrical propensity - "walking" tests
[5] ISO 10965：1998 Carpets – Determination of electrical resistance
[6] ISO 4918：1990 Textile floor coverings - Determination of wear - castor chair tests
[7] ISO 13746：2000 Textile floor coverings – Pavement and use instruction for stairs carpets
[8] EN 1307:2005 Textile floor coverings - Classification of pile carpets
[9] EN 14215:2003 Textile floor coverings - Classification of machine-made pile rugs and runners
[10] CEN/TC 134 N 1209：2006 Textile floor coverings – The use for labels related to classification - Application cases
[11] EN 14041：2004 Elastic and textile floor coverings and laminate floor covering – Necessary features
[12] ASTM 609：2005 Standard testing method by using the horizontal traction and sliding tester