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GB 18383-2007

Replacing GB 18383-2001

# General technical requirements for products with filling materials

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# **Foreword**

Sub-clauses 4.1, 4.2, Clause 5, Clause 6, Clause 7 of this Standard are mandatory; others are recommendatory.

This Standard replaces GB 18383-2001 General technical requirement for products with wadding fibre.

This Standard only specifies the requirements for basic general performance of products with filling materials. Specific product requirements shall refer to the corresponding standards.

Compared with GB 18383-2001, the main modifications in this Standard are as follows:

- a) modified the scope of GB 18383-2001 to "applicable to the domestic and non- domestic products with filling materials" (Clause 1 of this Edition; Clause 1 of Edition 2001);
- b) added and modified some normative references (Clause 2 of this Edition);
- c) modified the definitions of "filling and stuffing", "products with filling materials" and "foreign matter" (3.1, 3.2, 3.8 of this Edition; 3.1, 3.2, 3.3 of Edition 2001);
- d) added the terms and definitions of "domestic products with filling materials", "fibre waste", "textile waste", "rag flock", "textile waste derived from hospital" (3.3, 3.4, 3.5, 3.6, 3.7 of this Edition);
- e) modified the requirements for raw materials, the use of non-contaminated textile waste, a class of cotton linter in domestic products with filling materials is not prohibited (4.1.2 of this Edition; 4.1.1, 4.1.3, 4.1.4 of Edition 2001);
- f) added the specification that the non-contaminated textile waste as well as the rag flock, under certain conditions, can be used as bedding raw materials for domestic products with filling materials (4.1.3 of this Edition);
- g) deleted the quality requirements for cotton filling and stuffing AND non-mandatory sensory requirements for filling and stuffing (4.1.2, 4.2 of Edition 2001);
- h) added the requirements that the substance and fiber content tolerance must not be inspected in filling and stuffing of domestic products with filling materials (4.1.4, 4.1.7 of this Edition);

# General technical requirements for products with filling materials

# 1 Scope

This Standard specifies the terms, requirements, inspection (test) methods, inspection rules, marks, packaging, storage and transport for products with filling materials. This Standard is applicable to domestic and non-domestic products with filling materials.

# 2 Normative references

The following standards contain the provisions which, through reference in this Standard, constitute the provisions of this Standard. For dated references, subsequent amendments (excluding corrections) or revisions do not apply to this Standard. However, the parties who enter into agreement based on this Standard are encouraged to investigate whether the latest versions of these documents are applicable. For undated reference documents, the latest versions apply to this Standard.

GB/T 2910, Textiles - Quantitative chemical analysis (GB/T 2910-1997, eqv ISO 1833:1977)

GB/T 2911, Textiles--Ternary fibre mixtures--Quantitative analysis (GB/T 2911-1997, eqv ISO 5088:1976)

GB 5296.4, Instructions for use of products of consumer interest - Part 4: Textiles and apparel

GB/T 5705, Textile terms and definitions (Cotton)

GB/T 6499, Test method for percentage of trash content in raw cotton

GB/T 8170, Rules of rounding off for numerical values & expression and judgement of limiting values

GB 15979, Hygienic Standard for Disposable Sanitary Products

GB 18401, National general safety technical code for textile products

FZ/T 01057, Test method for identification of textile fibers

Disinfection technical specifications (Ministry of Health)

# 3 Terms and definitions

For the purposes of this document, the terms and definitions specified in GB/T 5705 and the following ones apply.

# 3.1 filling and stuffing

a general designation for natural fiber, chemical fiber used for filling and stuffing as well as the processed flakes, mats

# 3.2 products with filling materials

the products which use filling and stuffing as fillers and beddings; it can be divided into domestic products with filling materials and non-domestic products with filling materials

# 3.3 domestic products with filling materials

the products with filling materials in close contact with human body in daily life, mainly including clothing, shoes and hats, bedding, soft furniture, toys and other products with filling materials

#### 3.4 fibre waste

the falling-off, the cut-off, the stripped single fibre or bundle fiber during fiber or fiber products production process

#### 3.5 textile waste

the waste of thread and fabric, flakes, mats excluding the fibre waste during fiber products production process

#### 3.6 rag flock

the reprocessed fibre of textile product or textile waste by opening and scotching way

#### 3.7 textile waste derived from hospital

all kinds of fiber products eliminated or abandoned by medical and health institutions, mainly including absorbent cotton, skim gauze and other medical dressings, medical staff o clothes, products with filling materials and other fibre products

#### 3.8 foreign matter

other non-hygienic matters must not be inspected; obvious dusts must not be inspected.

- **4.1.5** The short fibre content with length of 13 mm and less of filling and stuffing in domestic products with filling materials must not exceed 25%. The short fibre content indicator of cotton and chemical fibre mixed filling and stuffing must not exceed 25% of the net dry content of cotton in the actual measured mixed fibre. If the filling and stuffing in domestic products with filling materials are kapok, down feathers, flakes, mats, the short fibre content shall not be examined.
- **4.1.6** The impurity rate of filling and stuffing in domestic products with filling materials shall not be greater than 1.4%. The impurity rate of filling and stuffing in other domestic products with filling materials shall not be greater than 2.0%.
- **4.1.7** When the filling and stuffing (excluding the flakes and mats used for soft furniture beddings) in domestic products with filling materials are made of two or more fibers, the reduction of actual content of each component's filling and stuffing to the marked content must not exceed 10% (absolute percentage). When the marked content of filling and stuffing is less than 30%, its actual content must not be less than 70% of the marked content (the fiber content is based on the net dry content).

# 4.2 Hygienic requirements for domestic products with filling materials

- **4.2.1** Pseudomonas aeruginosa, Staphylococcus aureus and hemolytic streptococcus and other pathogens must not be inspected.
- **4.2.2** Do not produce adverse irritation and allergic reactions to the skin and mucous membranes.
- **4.2.3** Fleas, ticks, bugs and other diseases that may spread the disease and health hazards of foot animals and cockroaches must not be inspected by visual observation.
- **4.2.4** There must be no odors.

NOTE Odors refer to musty, gasoline flavor, kerosene flavor, diesel flavor, fishy smell, aroma of aromatic smell, smell of uncleaned animal fiber, etc.

#### 4.3 Other requirements

The other basic safety requirements and quality requirements for products with filling materials shall be in accordance with relevant national standards and industry standards.

"Disinfection technical specifications".

- **5.3.3** The allergic reaction test shall be carried out according to the "skin allergy test" in experimental technical specification of Ministry of Health "Disinfection technical specifications".
- **5.3.4** The odor inspection shall be carried out according to GB 18401.

# 5.4 Inspection of other indicators

The inspection and determination for other technical indicators of products with filling materials shall be carried out according to relevant national standards or industry standards.

# 6 Inspection rules

## 6.1 Sampling

# 6.1.1 Sampling for filling and stuffing

- **6.1.1.1** Sampling should be representative and should be extracted more at random.
- **6.1.1.2** For bulk filling and stuffing, extract 0.1% of its weight, but at least not less than 1 kg. For filling and stuffing in packets, extract 1 packet out of each 10 packets; if there are less than 10 packets, it shall be calculated as 10 packets; the sampling amount for each packet shall not be less than 300 g.
- **6.1.1.3** The sampling for filling and stuffing of flakes and mats shall be in accordance with minimum test volume requirements.

## 6.1.2 Sampling for products with filling materials

The products with filling materials made of same raw materials shall be one batch. When batch amount  $\leq 1000$  pcs, at least 3 shall be extracted at random. When 1000 pcs < batch amount  $\leq 5000$  pcs, at least 5 shall be extracted at random. When batch amount is greater than 5000 pcs, at least 2 shall be extracted at random for each additional 5000 pcs (if there are less than 5000 pcs, it shall be calculated as 5000 pcs).

#### 6.2 Determination of results

- **6.2.1** Should the inspection results of extracted samples comply with the provisions of 4.1, 4.2, 7.2 and 7.3, this batch of products shall be determined to meet this Standard.
- **6.2.2** Should any extracted sample fail to comply with any provisions of

# Annex A

# (Normative)

# Test method for short fibre content of filing and stuffing

#### A.1 Laura method

#### A.1.1 Test environment

The test shall be carried out at atmospheric conditions with a temperature of  $(20 \pm 2)^{\circ}$ C and a relative humidity of  $(65 \pm 3)\%$ .

## A.1.2 Instruments and appliances

Y111 roller length analyzer, clip #1, clip #2, sparse card, dense card, balance (scale value of 0.1 mg), limit machine velvet.

### A.1.3 Instrument adjustment

- **A.1.3.1** When the pointer is at 16<sup>th</sup> grid of worm gear scale, the peach-shaped eccentric wheel should start contacting with the slide.
- **A.1.3.2** Check that the distance from the inner edge of the slide to the lower roller is 9.5 mm. If it is greater or less than 9.5 mm, the 3-mm distance from clip #1 to the bezel shall need to be enlarged or reduced.
- **A.1.3.3** Check that the pressure applied to the leather stick by the spring on the analyzer cover should be 6860 cN (7000 gf); the spring pressure for clip #2 should be 196 cN (200 gf).
- **A.1.3.4** Check whether clip 1 is flat and seamless, and the flannel on clip #2 is free of wear and tear.

## A.1.4 Sample preparation

- **A.1.4.1** Tear and well mix two test samples. Place them flat on the work table, making fiber layer of uniform thickness. Extract the fibre at random from multi-points (32 points) of front and back to get one 30 mg (±1 mg) sample respectively.
- **A.1.4.2** Organize the samples. Use hand pull method, carding method to make a fibre bundle that is relatively straight, with one neat end and without impurities.
- A.1.4.3 Hold the neat end of fiber bundle. Place clip #1 clamp close to the

# Annex B

(Normative)

# Test method for impurity rate of filling and stuffing

#### **B.1** Machine inspection method

This method is applicable to cotton and mixed filling and stuffing of which the principal length is 38 mm and less.

- **B.1.1** From two test sample, respectively extract 50g±2g sample at random and at multi-point for the test.
- **B.1.2** The test steps and results calculation shall be in accordance with GB/T 6499.

# **B.2** Hand inspection method

This method is not applicable to non-pure cotton and mixed filling and stuffing of which the principal length is greater than 38 mm.

#### **B.2.1** Instruments and appliances

Balance (scale value 0.01 g), tweezers.

#### **B.2.2** Test steps

- **B.2.2.1** Extract two small test samples respectively from two test samples at random and at multi-point. Weigh the total mass of 20 g  $\pm$  1 g (to the nearest of 0.1 g) with balance respectively.
- **B.2.2.2** Use hand to pick out impurities (seeds, leaves, grass thorns, hard grass seeds, branches, skin pieces, stiff silk, silk wire, plastic blocks, etc.). Weigh two impurities respectively, to the nearest of 0.01 g.

#### **B.2.2.3** Calculation:

Calculate the impurity rate according to equation (B.1). The results shall be rounded to 2 decimal places according to GB/T 8170.

$$Z = \frac{m_1}{m} \times 100\%$$
 ..... (B. 1)

where,

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