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

FZ/T 73001-2016

Replacing FZ/T 73001-2008

Hosiery

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces FZ/T 73001-2008 "Hosiery". Compared with FZ/T 73001-2008, the main technical changes are as follows:

a) the scope of application of the standard was revised (see Clause 1); b) the introductory wording of the normative references was adjusted (see Clause 2); c) the terms of the former standard were deleted and the terms hosiery size, nonelastic hosiery, elastic hosiery with heel, elastic hosiery without heel, elastic hosiery without setting, hosiery with single layer bottom and hosiery with reinforced bottom were added (see Clause 3); d) the product classification was revised, and the classification of ankle socks (boat socks), pantyhose with set heel, pantyhose with heel and open-toe pantyhose was made explicit; e) an illustration of the ankle sock (boat sock) was added (see Figure 2);

f) the total length tolerance, the opening height tolerance and the opening width tolerance were deleted from the specification sizes and tolerances (see 5.3.1.2); g) the first and last hosiery sizes in the table of specification sizes and tolerances were adjusted, and some bottom lengths were changed; h) the requirements for specification sizes and tolerances were revised, the former Tables 1 to 6 being merged into Tables 1 to 3 of this standard; i) the assessment index for the opening width tolerance of elastic hosiery without heel was adjusted (see Table 3); j) Table 7 of the former standard, on the grading provisions, was deleted; k) some surface defects were adjusted and added (see 5.3.2);

l) the assessment indices for the longitudinal and transverse extension values and their tolerances were revised, the corresponding notes were added, and the former Tables 9 to 15 were merged into Tables 5 to 7 of this standard (see 5.4.1); m) part of the requirements of the former Table 17 on the grading of internal quality were adjusted, and the former

Tables 16 and 17 were merged into Table 8 of this standard; n) the wording describing the transverse extension position of the leg of hosiery with heel and the longitudinal extension position of the sock bottom was adjusted (see b) and c) of 6.4.1.2.1); o) a diagram of the clamping position of the sock bottom of hosiery with heel was added (see Figure 5);

p) the test description of the transverse extension position of the lower leg of pantyhose, of the longitudinal extension position of the crotch and of the longitudinal extension position of the leg length was revised (see d), e) and f) of 6.4.1.2.3); q) the types of hosiery tested with the standard tension and the extended tension were revised (see 6.4.1.3.1); r) the description of the longitudinal tensile test on the bottom length of cotton/spandex core-spun interwoven (thick) hosiery was deleted; s) the rule of decision for the longitudinal and transverse extension values was revised (see 7.2.1); t) the sampling position for fibre content was revised (see 6.4.3); u) the way of stating the specification marking was adjusted (see 8.1.2).

This standard was proposed by the China National Textile and Apparel Council and is under the jurisdiction of the Knitted Goods Subcommittee of the National Technical Committee on Textiles of Standardization Administration of China (SAC/TC 209/SC 6).

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The standard was first issued in 1991 and revised in 2004 and in 2008.

1 Scope

This standard specifies the terms and definitions, the product classification, the requirements, the inspection rules, the rules of decision and the instructions for use, packaging, transportation and storage of hosiery.

It applies to the assessment of the quality of men's and women's hosiery. It does not apply to compression stockings, warp-knitted hosiery, sports socks, ladder-resist hosiery and the

like.

This standard does not apply to hosiery for infants of 36 months and under.

2 Normative references

The following documents are indispensable to the application of this document. For dated references, only the edition bearing the date applies; for undated references, the latest edition (including all amendments) applies.

GB/T 250 Textiles - Tests for colour fastness - Grey scale for assessing change in colour · GB/T 2910 (all parts) Textiles - Quantitative chemical analysis · GB/T 2912.1 Textiles - Determination of formaldehyde - Part 1: Free and hydrolysed formaldehyde (water extraction method) · GB/T 3920 Textiles - Tests for colour fastness - Colour fastness to rubbing · GB/T 3921-2008 Textiles - Tests for colour fastness - Colour fastness to washing with soap or soap and soda · GB/T 3922 Textiles - Tests for colour fastness - Colour fastness to perspiration · GB/T 4856 Packaging of knitted cotton goods · GB 5296.4 Instructions for use of products of consumer interest - Part 4: Textiles and apparel · GB/T 5713 Textiles - Tests for colour fastness - Colour fastness to water · GB/T 7573 Textiles - Determination of pH of aqueous extract · GB/T 16988 Determination of the content of mixtures of special animal fibre and sheep wool · GB/T 17592 Textiles - Determination of the banned azo colourants · GB 18401 National general safety technical code for textile products · GB/T 29862 Textiles - Identification of fibre content · GB 31701 Safety technical code for infants and children textile products · FZ/T 01026 Textiles - Quantitative chemical analysis - Mixtures of four components fibre · FZ/T 01057 (all parts) Test method for identification of textile fibres · FZ/T 01095 Textiles - Testing and evaluation for spandex products · FZ/T 01101 Textiles - Determination of fibre content - Physical method · FZ/T 30003 Quantitative analysis method for flax and cotton blend products - Microprojection method · GSB 16-2159 Standard depth sample card for knitted products (1/12) · GSB 16-2610 Colour sample photographs of surface defects of hosiery

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Hosiery size - the length of the sole of the human foot expressed in centimetres; it is the basis on which the length of the sock bottom is designed.

3.2 Nonelastic hosiery - hosiery with a heel (a knitted, shaped heel) containing no elastic fibre, the welt excepted. Example: pure cotton socks.

3.3 Elastic hosiery with heel - hosiery with a heel (a knitted, shaped heel) containing elastic fibre, the welt excepted. Examples: socks interwoven with spandex core-spun yarn, socks interwoven with elastic nylon filament.

3.4 Elastic hosiery without heel - hosiery without a heel containing elastic fibre. Examples: elastic ankle socks, mid-calf socks, long stockings and pantyhose.

3.5 Elastic hosiery without setting - elastic hosiery without heel that has not been through a setting process.

3.6 Hosiery with single layer bottom - hosiery whose bottom has not been reinforced.

3.7 Hosiery with reinforced bottom - hosiery whose bottom has been reinforced.

4 Product classification

4.1 By the presence of elastic fibre, products are divided into nonelastic hosiery and elastic hosiery, the latter comprising elastic hosiery with heel and elastic hosiery without heel.

4.2 By style, products are divided into hosiery with heel, which includes ankle socks (boat socks), and hosiery without heel, which includes ankle socks, mid-calf socks, long stockings, pantyhose and the like; among these, pantyhose with set heel, pantyhose with heel and open-toe pantyhose all fall in the pantyhose category.

5 Requirements

5.1 Content of the requirements. The requirements are divided into appearance quality requirements and internal quality requirements. Appearance quality covers the specification sizes and tolerances (not assessed for elastic hosiery with heel), the surface defects and the sewing provisions. Internal quality covers formaldehyde content, pH value, odour, azo colourants that release carcinogenic arylamines, fibre content, colour fastness to water, to perspiration, to rubbing and to washing with soap, and the transverse and longitudinal extension values.

5.2 Grading provisions. 5.2.1 The quality of hosiery is graded by the pair (or piece) into first-quality products and qualified products. 5.2.2 In grading, internal quality is assessed by batch and appearance quality by the pair (or piece); the two are combined and the grade is set by the lowest of them.

5.3 Appearance quality requirements. 5.3.1 Specification sizes and tolerances: the names of the parts of a sock are given in Figures 1 to 4; the sizes and tolerances of nonelastic hosiery are given in Table 1 (hosiery sizes 12 to 30, with a bottom length tolerance of +0.5 cm / -0.8 cm), those of elastic hosiery with heel in Table 2, whose bottom lengths and tolerances are reference sizes and do not take part in the assessment of appearance quality, and the opening width tolerance of elastic hosiery without heel in Table 3. 5.3.2 Surface defects are assessed against Table 4 and, for colour, against GSB 16-2610.

5.4 Internal quality requirements. 5.4.1 The transverse and longitudinal extension values are given in Tables 5 to 7. For nonelastic hosiery and elastic hosiery with heel, the longitudinal extension value of the bottom runs from 29.0 cm at hosiery size 19 to 20 up to