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Pressure Socks

压力袜

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Foreword

This standard was proposed by China National Textile And Apparel Council.

This standard shall be under the jurisdiction of Technical Subcommittee on Knitwear of the Technical Committee on Textiles of Standardization Administration of China (SAC/TC 209/SC 6).

Chief drafting organizations of this standard: Zhejiang Nai'er Group Co., Ltd., Langsha Knitting Co., Ltd., Zhejiang Jiamengyi Hosiery Co., Ltd., Gaoyao City Gold Coast Knitting Factory Co., Ltd. and National Quality Supervision and Inspection Center of Knitted Products.

Chief drafting staffs of this standard: Shi Jigang, Liu Ailian, Jin Jianming, Yu Jianjun and Dai Zhengyi.

Pressure Socks

1 Scope

This standard specifies pressure socks' terms and definitions, product classification, requirements, test methods, judgment rules as well as product's instructions for use, packaging, transportation and storage.

This standard is applicable to appraise the quality of chemical fiber pressure socks and pressure socks that are interwoven of cotton (wool and chemical fiber blended yarn) and chemical fiber. Other fiber pressure socks may be referred to this standard.

2 Normative References

The following standards contain the provisions which, through reference in this standard, constitute the provisions of this standard. For dated reference, the subsequent amendments (excluding corrigendum) or revisions of these publications do not apply. However, all parties who reach into an agreement according to this standard are encouraged to study whether the latest edition of these documents is applicable. For undated references, the latest edition of the normative document applies.

GB/T 250 Textiles - Tests for Colour Fastness - Grey Scale for Assessing Change in Colour (GB/T 250-2008, ISO 105-A 02:1993, IDT)

GB/T 251 Textiles - Tests for Colour Fastness - Grey Scale for Assessing Staining (GB/T 251-2008, ISO 105-A 03:1993, IDT)

GB/T 2910 (All Parts) Textiles - Quantitative Chemical Analysis

GB/T 2912.1 Textiles - Determination of Formaldehyde - Part 1: Free and Hydrolized Formaldehyde (Water Extraction Method)

GB/T 3920 Textiles - Tests for Colour Fastness - Colour Fastness to Rubbing (GB/T 3920-1997, eqv ISO 105-X 12:1993)

GB/T 3921 Textiles - Tests for Colour Fastness - Colour Fastness to Washing with Soap or Soap and Soda (GB/T 3921-2008, ISO 105-C10:2006, MOD)

GB/T 3922 Textiles - Testing Method for Colour Fastness to Perspiration (GB/T 3922-1995, eqv ISO 105-E 04:1994)

GB/T 4856 Package of Cotton Goods and Knitwear

GB 5296.4 Instructions for Use of Products of Consumer Interest - Instructions for Use of Textiles and Apparel

GB/T 5713 Textiles - Tests for Colour Fastness - Colour Fastness to Water (GB/T 5713-1997, eqv ISO 105-E 01:1994)

GB/T 7573 Textiles - Determination of pH of the Aqueous Extract (GB/T 7573-2002, ISO 3071:1980, MOD)

GB/T 8170 Rules of Rounding off for Numerical Values & Expression and Judgment of Limiting Values

GB 18401 National General Safety Technical Code for Textile Products

GSB 16-2159-2007 Knitwear Standard Depth Scale (1/12)

FZ/T 01053 Textiles - Identification of Fiber Content

FZ/T 01057 (All Parts) Test Method for Identification of Textile Fibers

FZ/T 01095 Textile - Test Method of Elastane Fiber Content

3 Terms and Definitions

For the purpose of FZ/T 73031-2009, the following terms and definitions apply.

3.1

Pressure socks

The socks, with the pressure (mmHg) in the gradient decrease from the ankle to the sock top, which gives people a sense of pressure when wearing and a sense of relaxation during the movement.

4 Product Classification

The pressure socks, according to materials, are divided into pressure socks that are woven of elastic nylon yarn (polyester yarn)/core-spun spandex yarn, pressure socks that are woven of cotton (wool and chemical fiber blended yarn)/core-spun spandex yarn, and pressure socks of chemical fiber/other fiber.

5 Requirements

5.1 Required contents

3 Sole length of open-toe pressure socks is beyond the scope of the assessment.

Table 5 Specification, Dimension and Tolerance for Over-knee Middle-leg Pressure Socks Woven of Cotton (Wool and Chemical Fiber Blended Yarn)/Core-spun Spandex Yarn In mm

Size	Sole length	Tolerance of sole length	Total length ≥	Top height ≥	Top width	Tolerance for top width
22-24	19	±1	57	3	13.5	±1
24-26	21					
26-28	23					
28-30	25					

Notes:

- 1 The total length prevails when the middle and high parts of the top are aligned to the corresponding pressure test point and the pressure socks are covered on the model leg.
- 2 If customers put forward additional requirements for the specification and dimension, customer requirements shall prevail.
- 3 Sole length of open-toe pressure socks is beyond the scope of the assessment.

Table 6 Specification, Dimension and Tolerance for Long Pressure Socks Woven of Cotton (Wool and Chemical Fiber Blended Yarn)/Core-spun Spandex Yarn In mm

Size	Sole length	Tolerance of sole length	Total length≥	Top height≥	Top width	Tolerance for top width
22-24	19	±1	72	3	14.5	±1
21-26	21					
26-28	23					
28-30	25					

Notes:

- 1 The total length prevails when the middle and high parts of the top are aligned to the corresponding pressure test point and the pressure socks are covered on the model leg.
- 2 If customers put forward additional requirements for the specification and dimension, customer requirements shall prevail.
- 3 Sole length of open-toe pressure socks is beyond the scope of the assessment.

5.3.2 Grading requirements for specification and dimension

They are detailed in Table 7.

Table 7 Grading Requirements for Specification and Dimension In mm

Item			First-grade product	Conforming product
Sole length	Size	22-30	In accordance with standard and tolerance in Table 1~Table 6.	-1.5 above the standard tolerance of first-grade product
Total length	Below-knee middle-leg pressure socks woven of elastic nylon yarn (polyester yarn)/core-spun spandex yarn			-1.5 over the standard tolerance of first-grade product
	Over-knee middle-leg pressure socks and long			-3 over the standard

They are detailed in Table 11.

Table 11 Grading Requirements for Inherent Quality

Item	First-grade product	Conforming product
Pressure	In accordance with the requirements of this standard. 2mmHg difference is allowable for a couple of pressure socks in the same pair.	-1 mmHg over the standard of first-grade product is allowable. 1mmHg difference over the standard of first-grade product is allowable for a couple of pressure socks in the same pair.
Colour fastness	In accordance with the requirements of this standard	
Formaldehyde content		
pH value		
Peculiar smell		
Decomposable aromatic amine dyes		
Fiber content (dry net content)		

6 Test Methods

6.1 Sampling quantity

6.1.1 For the appearance quality, 2%~3% of lots is sampled randomly according to the delivery lot as well as the type, colour and specification (requirements for specification and dimension as well as tolerance, surface defect and sewing). Moreover, the quantity shall not be less than 15 pairs (including the samples for inherent quality inspection).

6.1.2 For the inherent quality, 5 pairs are sampled randomly according to the delivery lot as well as the type, colour, specification, pressure, fiber content, formaldehyde content, pH value, peculiar smell, decomposable aromatic amine dyes and colour fastness; moreover, the quantity shall be subject to the test quantity.

6.2 Inspection conditions for appearance quality

6.2.1 Generally, lighting is adopted for the inspection. A 40W fluorescent lamp of blue light or white light is used with a lamp cover and the vertical distance from the lamp cover to the surface center of inspection platform is $50\text{cm} \pm 5\text{cm}$ or the inspection is carried out under the light source of D_{65} .

6.2.2 If the natural light in room is adopted, the light rays shall be appropriate and the emitting direction of the light rays is from the top left (or right) corner of the north. The product shall be free from direct sunlight.

6.2.3 During the inspection, the product is kept flat on inspection platform and the inspector shall look squarely at the product surface. If any suspicious defect related to

It is in accordance with the requirements of GB/T 3920 (test position: the sole is scissors-cut just as direct direction).

6.4.6 Colour fastness to water test

It is in accordance with the requirements of GB/T 5713.

6.4.7 Fiber content test

It is in accordance with the requirements of GB/T 2910, FZ/T 01057 and FZ/T 01095(test position: the part above the heel height is scissors-cut).

6.4.8 Formaldehyde content test

It is in accordance with the requirements of GB/T 2912.1.

6.4.9 pH value test

It is in accordance with the requirements of GB/T 7573.

6.4.10 Peculiar smell and decomposable aromatic amine dyes test

It is in accordance with the requirements of GB 18401.

6.4.11 Grading of colour fastness

It is judged in accordance with GB/T 250 and GB/T 251.

7 Judgment Rules

7.1 Treatment methods of inspection result

7.1.1 Appearance quality

Pairs are taken as the unit and products whose nonconforming rate is over 5.0% or quantity of holes and missed stitches are over 3.0% are judged as unacceptable.

7.1.2 Inherent quality

7.1.2.1 During the pressure test, if the confirming rate of test points on all parts of 5 pairs of pressure socks) reaches 80% or above, this lot of products will be judged as acceptable. Generally, the test may be carried out under normal temperature. In case of any dispute, the test data under the constant temperature and humidity conditions prevails.

7.1.2.2 If inspection results of formaldehyde content, pH value, colour fastness to soaping, colour fastness to water, colour fastness to perspiration, colour fastness to rubbing, peculiar smell, decomposable aromatic amine dyes and fiber content of

products are qualified, this lot of products will be judged as acceptable; otherwise, they will be rejected.

7.2 Re-inspection

7.2.1 If either party has disagreement on the inspection result during the test, the re-inspection may be required for items in dispute within the period specified by both Parties, and both Parties shall jointly carry out the test.

7.2.2 The re-inspection quantity is the quantity of preliminary inspection.

7.2.3 The re-inspection result is treated according to the requirements of Section 7.1, subject to the re-inspection result.

8 Product's Instructions for Use, Packaging, Transportation and Storage

8.1 Product's instructions for use

8.1.1 Product's instructions for use shall be in accordance with the requirements of GB 5296.4.

8.1.2 The fiber content shall be indicated with the content of parts above the heel height.

8.1.3 Specification marking: size of the socks shall be indicated in cm for below-knee middle-leg pressure socks, over-knee middle-leg pressure socks and long pressure socks.

8.2 Packaging

It is in accordance with the requirements of GB/T 4856 or requirements of the agreement.

8.3 Transportation

The product transportation in boxes shall be fireproof, damp proof and antipollution.

8.4 Storage

The product shall be put in the shady and cool, ventilated, dry and clean warehouse and it shall be mould-proof and mothproof.

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