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

FZ/T 54072-2014

**Bright profiled polyamide 6 highly oriented yarn
(English Translation)**

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Foreword

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

The standard proposed by China Textile Industry Association.

This standard by the Shanghai textile industry technical supervision of the centralized.

This standard was drafted. Yiwu Huading Nylon Co., Ltd., Guangdong Xinhui Meida Nylon Co., Ltd., Zhejiang Yaxing fibers Limited, Kam matter of Zhejiang Chemical Fiber Co., Ltd. Shaoxing Hua Zhong chemical fiber, synthetic fiber Changle Heng Shanghai Science and Technology Co., Ltd., Shanghai Textile Workers Technical supervision of the industry.

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Bright shaped nylon 6 high-oriented yarn

1 Scope

This standard specifies the bright shaped nylon 6 high oriented yarn (referred HOY) terms and definitions, product identification, technical requirements, test side Method, inspection rules and signs, packaging, transportation and storage requirements.

This standard applies to linear density in the range of 8.0dtex ~ 400.0dtex, monofilament line density 1.0dtex ~ 6.0dtex, triangular and trefoil Cross-section, light, pressure wash without twisting and without stereotypes civilian character nylon 6 high-oriented yarn (HOY)

of characterization, inspection, arbitration. its Other types of bright shaped wire can be highly oriented nylon 6 with reference to use.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 250 textile color fastness test assessing change in color like the gray card GB/T 2828.1-2012 Sampling procedures for inspection - Part 1. by acceptance quality limit (AQL) retrieval batch test sample plan GB/T 3291.1 textile material properties and test - Part 1. fibers and yarns GB/T 3291.3 textile material properties and test - Part 3. General GB/T 4146.1 Textiles chemical fiber - Part 1. generic name GB/T 4146.3 Textiles chemical fiber - Part 3. Testing Terminology GB/T 6502 sampling method of chemical fiber filament GB/T 6503 Test Methods for chemical fiber moisture regain GB/T 6504 Test method for chemical fiber oil content GB/T 6505 chemical fiber filament heat shrinkage test method GB/T 8170 repair value expressed about the rules and limit values and judgment GB/T 14343 chemical fiber filament linear density test method GB/T 14344 chemical fiber filament tensile properties GB/T 14346 chemical fiber filament electronic evenness test method FZ/T 50001 Test method of synthetic filament network FZ/T 50002 Test method for chemical fiber shaped degree FZ/T 50008 nylon filament yarn dyeing uniformity test method FZ/T 51004 chips fiber grade polycaprolactam

3 Terms and Definitions

GB/T 3291.1, GB/T 3291.3, GB/T 4146.1 and GB/T 4146.3 defined and the following terms and definitions apply to this file.

Using titanium dioxide content of less than or equal to 0.05% (by mass) of polycaprolactam chips using profiled spinneret, spinning Highly oriented nylon 6 yarn.

4 Product Identification

Product specifications in fiber linear density (dtex) and the number of filaments (f) shows.

Example. a linear density of 44dtex, number of filaments is bright shaped nylon 6 highly oriented yarn (HOY) 24, and the product specifications can be expressed 44dtex/24f.

5.1 Product classification

Product grades divided into superior products (AA), First grade (A), qualified product (B) three levels below the qualified product is substandard products (C).

5.2 Performance Project and indicators

Bright shaped nylon 6 highly oriented yarn (HOY) performance requirements are shown in Table 1.

Table 1 bright shaped nylon 6 highly oriented yarn (HOY) performance index value

No. Item Premium grade First grade Qualified 1 linear density deviation rate /% ≤ 78.0 dtex ± 2.0 ± 2.5 ± 3.5 > 78.0 dtex ± 2.5 ± 3.0 ± 4.0 2 linear density coefficient of variation (CVb) /% ≤ 1.20 ≤ 1.80 ≤ 2.80 > 78.0 dtex 1.50 2.00 3.00 3 breaking strength a/(cN/dtex) M1a ± 0.4 M1a ± 0.5 M1a ± 0.6 4 breaking strength coefficient of variation (CVb) /% ≤ 6.00 ≤ 8.00 ≤ 10.00

5 Elongation at break /% M2b ± 4.0 M2b ± 6.0 M2b ± 8.0

6 Elongation at break coefficient of variation (CVb) /% ≤ 8.00 ≤ 10.00 ≤ 12.00 7 boiling water shrinkage /% M3c ± 1.5 M3c ± 2.5 M3c ± 3.0 8 dyeing uniformity (gray card)/Grade ≥ 4 4 3

11 Relative radial profiled coefficient of variation (CV) /% ≤ 15.0 20.0

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aM1 center for the breaking strength value selected in ≥ 3.00 cN/dtex range, minimum breaking strength values ≥ 2.80 cN/dtex, if there are special circumstances, by supply and demand the two sides negotiated.

bM2 center value for the elongation at break in the range of 55.0% ~ 75.0% selected, once can not arbitrarily change, if special circumstances, by both parties OK consultations.

cM3 boiling water shrinkage central value within the range of 5.0% to 8.0% is selected, once can not arbitrarily change, if special circumstances, by both parties Association Suppliers OK.

5.3 oil content, online degree Negotiated by both parties, included in commercial contracts, if necessary.

5.4 appearance items and indicators Negotiated by both parties or in accordance with the requirements of Appendix A to include commercial contracts, if necessary.

6 Test methods

6.1 linear density test According to GB/T 14343 regulations.

6.2 tensile properties Performed in GB/T 14344 regulations.

6.3 The boiling water shrinkage test According to GB/T 6505 regulations.

6.4 dyeing uniformity test Press FZ/T 50008 regulations.

6.5 Unevenness test

Performed in GB/T 14346 regulations. Sample length of a single test is not less than 400m, where arbitration is recommended 100m/min the test speed.

6.6 Alien Test

Press FZ/T 50002 regulations.

6.7 Oil Content Test Performed in GB/T 6504 regulations. Arbitration, using the extraction method.

6.8 Network Test

Press FZ/T 50001 regulations.

6.9 Regain Test

According to GB/T 6503 regulations.

6.10 titanium dioxide content Press FZ/T 51004 regulations.

6.11 Visual inspection According to supply and demand sides agreed to perform or execute in accordance with the provisions of Appendix A.

7 Inspection rules

7.1 Test Project

7.1.1 Table 1 items are assessment items, test methods in accordance with Chapter 6 of the inspection.

7.1.2 The oil content, networking, appearance inspection items according to the requirements of supply and demand sides, visual inspection can also be examined in accordance with the provisions of Appendix A.

7.2 Group granted by the Within a certain range by the periodic sampling test batch composition. A production batch by batch testing a composition, but also by a number of inspection lots composition.

7.3 sampling provision

7.3.1 Appearance Items full inspection. Laboratory samples drawn tube weight and appearance should be consistent with the corresponding level.

7.3.2 Table 1 numbers 1 to 9 laboratory sample performance tests according to GB/T 6502 provisions sampling (dyeing uniformity test tube by taking Like staining).

7.4 Evaluation of test results Measured or calculated values in Table 1 Performance 7.4.1 Project/T 8170 in the rounding value comparison method compared with the limit values according to indicators in Table 1 GB, One by one rating. Wherein staining uniformity is poor