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

FZ/T 54073-2014

**Bright profiled polyamide 6 partially oriented yarns
(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. Guangdong Xinhui Meida Nylon Co., Ltd., Zhejiang Yuxin Poly Pan Industrial Co., Ltd., Shanghai Textile Industry Technical supervision, Kam matter of Zhejiang Chemical Fiber Co., Ltd. Zhejiang Asia Fiber Co., Ltd., Changle Heng Shanghai Science and Technology Co., Ltd. synthetic fiber.

1 Scope

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

This standard applies to pre-oriented yarn polycaprolactam processing of raw materials made of linear density in the range of 12.0dtex ~ 480.0dtex, single Yarn density 1.0dtex ~ 6.0dtex, trilobal and triangular cross-section bright POY, other types of bright shaped nylon 6 prefetch Referring to the wire can be used.

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 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 50002 Test method for chemical fiber shaped degree 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.

Bright shaped nylon 6 POY brightprofiledpolyamide6partialyoriented yarn Using titanium dioxide content of less than or equal to 0.05% (by mass) of polycaprolactam chips using profiled spinneret, spinning A nylon 6 pre-oriented yarn (POY).

4 Product Identification

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

Example. a linear density of 44dtex, the number of single-beam filament is bright shaped nylon 6 POY 24 (POY), which is expressed as product specifications 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 Physical properties and projects index value

Table 1.

Table 1 bright shaped nylon 6 POY index value and the physical properties of the project

No. Project for Excellence (AA) First grade (A) Qualified (B) 1 linear density deviation rate /% $\pm 2.5 \pm 3.0 \pm 4.0$ 2 linear density coefficient of variation (CVb) /% ≤ 1.00 1.50 1.80 3 breaking strength/(cN/dtex) ≥ 3.40 3.20 3.00 4 breaking strength coefficient of variation (CVb) /% ≤ 5.00 7.00 9.00

5 Elongation at break /% $M_a \pm 5.0$ $M_a \pm 7.0$ $M_a \pm 9.0$

6 Elongation at break coefficient of variation (CVb) /% ≤ 7.00 9.00 10.00 7 dry irregularity (CV) /% ≤ 2.00 2.50 3.00

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

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aM for the breaking elongation central value within the range of 55.0% ~ 80.0% selected, once identified can not be arbitrarily changed, if there are special circumstances, supply and demand sides negotiated determine.

5.3 oil content, appearance items and the index value both parties are determined by supply and demand, but also the appearance of the project according to 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 Unevenness test

Performed in GB/T 14346 regulations.

6.4 relative radial profiled Test Press FZ/T 50002 regulations.

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

6.6 titanium dioxide content Press FZ/T 51004 regulations.

6.7 Regain Test

According to GB/T 6503 regulations.

6.8 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 oil content and appearance inspection items by both supply and demand requirements of the inspection, 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 7 physical properties of laboratory samples test samples according to GB/T 6502 regulations.

7.4 Evaluation of test results 7.4.1 measured or calculated values of physical properties/T 8170 in the rounding value comparison Comparison according to GB limit values and indicators of Table 1, one by one Rating.

7.4.2 Visual inspection items by both parties or required by the requirements specified in Appendix A, the cylinder-by-assessment.

7.4.3 Evaluation comprehensive product level, to examine the physical properties and appearance batch index lowest level for a given product level.

7.5 reinspection rules

7.5.1 General

Batch of products to the consignee within three months, as the acceptance or objection to draw quality reinspection. If the batch number of the product used when more than one third should apply for re-inspection. However, if the consignee can produce evidence to prove that the product does affect yield after processing Quality products, and when causing serious damage, we should analyze the causes and define responsibilities of both parties, consultations.

7.5.2 Test items

With 7.1.

7.5.3 Batch provisions Original batch production batch groups, but the difference between the production date interval exceeds 90d product is not according to the same batch Batch.

7.5.4 Sampling provisions 7.5.4.1 appearance and weight difference of sampling. According batch II accordance with the provisions GB/T 2828.1-2012 Table 1, the general test level Determine the sample size (word).

Laboratory sample 7.5.4.2 Table 1 No. 1 to 7 physical properties of the samples according