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

FZ/T 54024-2019

**Polyamide 6 pre-oriented yarns
(English Translation)**

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Foreword

This Standard was drafted in accordance with the rules provided in GB/T 1.1-2009.

This Standard serves as a replacement of FZ/T 54024-2009 Polyamide 6 Pre-oriented Yarn.
In

comparison with FZ/T 54024-2009, the main technical changes are as follows.

---The monofilament linear density range is modified from 1.0 dtex ~ 5.5 dtex into 0.5 dtex ~ 7.0 dtex (see Chapter 1; Chapter 1 of Version 2009);

---In the property items and indicators, the following modifications are made (see Table 1 and 5.4; Table 1 of Version 2009).

lambda The breaking tenacity is adjusted;

lambda The coefficient of variation of elongation at break is adjusted;

lambda The regulation on oil content, which is determined through negotiation between the supply-side and the demand-side, is added;

---In the appearance items and indicators, loose ring filament is modified into ring filament, the classification by monofilament linear density is added, and the indicators are adjusted (see Table A.1; Table A.1 of Version 2009);

---In the appearance inspection conditions, the illumination at the working point is adjusted

(see A.2.1; A.2.1 of Version 2009);

---The humidity adjustment in the general rules of test methods and the quick humidity adjustment method in Appendix B are deleted (see Chapter 6; 6.1 and Appendix B of Version 2009).

This Standard was proposed by China National Textile and Apparel Council.

This Standard shall be under the jurisdiction of Shanghai Textile Industry Technical Supervision

Institute.

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1 Scope

This Standard specifies the terms and definitions, classification and identification, technical requirements, test methods, inspection rules, and the requirements for marking, packaging, transportation and storage of polyamide 6 pre-oriented yarns.

This Standard is applicable to pre-oriented yarns processed from polycaprolactam as the raw

material (mainly used for processing drawn textured yarns), and with a nominal linear density

range of 8 dtex ~ 444 dtex; glossy, semi-dull and full-dull natural-colored polyamide 6 pre-oriented yarns with a monofilament linear density of 0.5 dtex ~ 7.0 dtex, and a round cross section.

2 Normative References

The following documents are indispensable to the application of this document. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all

the

modifications) is applicable to this document.

GB/T 250 Textiles - Tests for Color Fastness - Grey Scale for Assessing Change in Color

GB/T 2828.1-2012 Sampling Procedures for Inspection by Attributes - Part 1.Sampling
Schemes Indexed by Acceptance Quality Limit (AQL) for Lot-by-lot Inspection

GB/T 3291.1 Textiles - Terms of Textile Material Properties and Test - Part 1.Fiber and Yarn

GB/T 3291.3 Textiles - Terms of Textile Material Properties and Test - Part 3.General

GB/T 4146 (all parts) Textiles - Man-made Fibers

GB/T 6502 Sampling Method of Man-made Filament Yarns

GB/T 6503 Man-made Fibers - Test Method of Moisture Regain

GB/T 6504 Man-made Fiber - Test Method for Oil Content

GB/T 8170-2008 Rules of Rounding off for Numerical Values & Expression and Judgement
of

Limiting Values

GB/T 14343 Testing Method for Linear Density of Man-made Filament Yarns

GB/T 14344 Testing Method for Tensile of Man-made Filament Yarns

GB/T 14346 Man-made Fiber - Testing Method for Unevenness of Filament Yarns -
Capacitance Method

FZ/T 50027 Man-made Fibers - Test Method for Determination of the Titanium Dioxide
Content

3 Terms and Definitions

The terms and definitions defined in GB/T 3291.1, GB/T 3291.3 and GB/T 4146 (all parts)
are

applicable to this document.

4.1 In accordance with the amount of titanium dioxide added during production, the products

can be classified into glossy, semi-dull and full-dull yarns.

4.2 Product specifications are identified by linear density (dtex) and the number of

monofilaments (f), for example, if the linear density is 93 dtex and the number of monofilaments is 68, the product specifications are expressed as. 93 dtex/68 f.

4.3 Product identification shall include. product specifications, color, product name or batch

No., which can be effectively distinguished.

5.1 Product Grading

Products are divided into three grades. superior products, first-class products and qualified products.

5.2 Property Items and Indicators

See Table 1.

provisions of 5.3.

7.4.3 For the assessment of the comprehensive grade of the products, the grade of the lowest

property indicator and appearance indicator in the inspection batch shall be determined as the

grade of the batch of products.

7.5.1 General rules

Within three months of the arrival of a batch of products to the recipient, re-inspection can be

requested as a matter of acceptance or if there is any objection to the quality. If more than one-

third of the batch of products has been used, the application for re-inspection is not allowed.

However, if the recipient can provide relevant evidence to prove that the batch of products has

indeed affected the quality of the processed products and caused serious losses, the causes shall