

FZ

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

FZ/T 54059-2012

**Polyester and polyamide composite partially oriented yarns
(English Translation)**

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Foreword

This Standard is drafted according to the rules specified in GB/T 1.1-2009

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

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

The responsible drafting organizations of this Standard. Xiamen Hongxin Special Fibre Co., Ltd, Yingkou Risheng Yingjin Synthetic Fiber Co., Ltd, Taicang Rongwen Synthetic Fiber Co., Ltd, Ningbo Green Textile Co., Ltd. and Shanghai Textile Industry Technical Supervision Center.

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Polyester and polyamide composite
partially oriented yarns

1 Scope

This Standard specifies the terms and definitions, product marking, technical requirements, test methods, inspection rules and marks, packaging, transportation, and storage of the polyester and polyamide composite partially oriented yarns.

This Standard applies to segmented polyester and polyamide composite partially oriented yarns - total linear density is 60 dtex - 600 dtex; linear density per filament is 1.70 dtex -

5.60 dtex; polyester and polyamide proportional range is 90/10 to 65/35; with circular

cross section, natural color, and bright and semi dull.

This Standard applies to sheath-core polyester and polyamide composite partially oriented yarns with 100 dtex to 390 dtex total linear densities, 1.60 dtex to 6.50 dtex linear density per filament, 85/15 to 50/50 polyester and polyamide proportional range, circular cross section, which are also naturally colored, bright and semi dull.

This Standard applies to partially oriented yarns that are manufactured by the composite spinning process with polyester (PET) and polyamide (PA6). Other polyester and polyamide composite partially oriented yarns may reference to this Standard.

2 Normative references

The articles contained in the following documents have become part of this document when they are quoted herein. For the dated documents so quoted, all the modifications (Including all corrections) or revisions made thereafter shall be applicable to this document.

GB/T 2828.1-2003 Sampling procedures for inspection by attributea - Part1.
Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection

GB/T 2910.7 Textiles - Quantitative chemical analysis - Part 7. Mixtures of polyamide and certain other fibres (method using formic acid)

GB/T 3291.1 Textiles - Terms of textile material properties and test - Part 1.
Fibre and yarn

GB/T 3291.3 Textiles - Terms of textile material properties and test - Part 3.
General

GB/T 4146.1 Textiles - Man-made fibres - Part 1. Generic names

GB/T 4146.3 Textiles - Man-made fibers - Part 3. Terms of inspection

GB/T 6502 Sampling method of man-made filament yarns

GB/T 6504 Testing method for oil content of man-made fibres

GB/T 6505 Testing method for thermal shrinkage of man-made filament yarns

GB/T 8170 Rules of rounding off for numerical values & expression and judgement of limiting values

GB/T 14190 Test methods of fiber grade polyester chip

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 Testing method for yarn irregularity of man-made filament yarns by means of electronic evenness tester

3 Terms and definitions

Those defined in GB/T 3291.1, GB/T 3291.3, GB/T 4146.1 and GB/T 4146.3 AND the following terms and definitions apply to this document.

3.1

Linear density per filament

It refers to the linear density in each single linear of multifilament, represented by PDF.

3.2

Polyester and polyamide composite partially oriented yarns

It refers to the partially oriented yarns that are manufactured by the composite spinning process with polyester (PET) and polyamide (PA6).

3.3

Segmented

It refers to that. 2 kinds of raw materials are aligned respectively along the fiber axis; the cross section of the fiber is in tangerine segment shaped, strip shaped or other shapes;

7.5.1 General rules

For the purpose of acceptance or in case of doubt about product quality, an application for re-inspection can be submitted within three months after the consignee receives a batch of products. Re-inspection shall not be applicable, if one third of the batch has been used.

However, if the consignee can present the relevant proof to prove that this batch will influence the quality of the post processing products and cause serious loss, it shall analyze the cause, clarify responsibilities, and deal with it through negotiation.

7.5.2 Inspection items

Same as 7.1.

7.5.3 Group-batch rules

Conduct the group-batch based on the original production batch. However, products with the production date interval more than 90 days cannot be considered as a same group-batch number.

7.5.4.1 Laboratory samples of each item test in Table 1 and Table 2 are taken according

to the provisions of GB/T 6502.

7.5.4.2 With regard to appearance and bobbin weight items, sample size (character

code) shall be determined by general inspection level II in Table 1 of GB/T 2828.1-2003 according to batch range.

7.6.1 The measured value or calculated value of each item in Table 1 and Table 2 shall

be compared to the limit value of the physical index in Table 1 and Table 2 according to the rounding value comparison method in GB/T 8170. The grade shall be evaluated one-by-one.

7.6.2 The inspection items of the appearance and bobbin weight shall confirm the

receiving number A_c and refusing number R_e based on AQL value of 4.0 of single sampling scheme in Table 2-A of the GB/T 2828.1-2003, under normal inspection according to the 7.5.4.2 sample size. Evaluate according to the requirements in Chapter 5. When the unqualified package quantity $\leq A_c$, it is deemed as the original grade. When the unqualified package quantity $\geq R_e$, it is judged as not conforming to the original grade.