

ICS 59.060.20
CCS W 52

FZ

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

FZ/T 54001-2012

Replacing FZ/T 54001-1991

**Polypropylene bulked continuous filament yarns(BCF)
(English Translation)**

Issued on: January 1, 1970

Implemented on: January 1, 1970

**Issued by: Ministry of Industry and Information Technology of the
People's Republic of China**

Table of Contents

Foreword	
1 Scope	
2 Normative references	
3 Terms and definitions	
4 Product identification	
5 Technical requirements	
5.1 Product Classification	
5.2 Physical performance items and indicator values	
6 Elongation at break coefficient of variation (CVb value) /% ≤ 15.00 -	
8 Thermal curl elongation /% ≥	
8.1 Mark	
8.2 Packaging	
8.3 Transportation	
8.4 Storage	
9 Other	

Foreword

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

This standard is an amendment to FZ/T 54001-1991 "Polypropylene BCF Wire". The main revisions are as follows.

---The standard name was changed from "Bront BCF Wire" to "Polypropylene Expanded Filament (BCF)";

--- Applicable range from Y-type and delta-type cross-section with light density of 800dtex~3400dtex, light, natural and colored polypropylene BCF, Change to trilobal and triangular cross section, light, matt, natural and colored polypropylene BCF from 800dtex to 3800dtex (see section 1) Chapter, Chapter 1 of the 1991 edition);

--- Normative references added FZ/T 50001 "Synthetic Fiber Filament Network Test Method" instead of Appendix B "Network Degree Test Method" (see Chapter 2, Chapter 2 of the 1991 edition);

--- Increase product identification (see Chapter 4);

---Product classification is changed from four grades of "excellent, first-class, second-class,

third-class" to. "Excellent, first-class, qualified" Grades, products below the quality of the product are equivalents (see Chapter 5, Chapter 4 of the 1991 edition);

---Fracture strength, coefficient of variation of breaking strength, coefficient of variation of elongation at break, boiling water shrinkage, thermal curl elongation Adjustments to quality indicators for rate, oil content, and elongation at break (see Chapter 5, Chapter 4 of the 1991 edition);

--- Appearance indicators in the tube weight project deviations reduced, wool, hard silk, color difference and other project indicators to adjust (see Appendix A, 1991 Chapter 4 of the edition);

--- Increased the test method for moisture regain and tube weight; (see Chapter 6, Chapter 5 of the 1991 edition);

--- Inspection rules are divided into factory inspection and re-inspection rules (see Chapter 7, Chapter 6 of the 1991 edition);

--- Marking, packaging, transportation, storage, adding "each package or each package should have a waterproof, dustproof protective layer", increase the storage conditions for "avoiding direct sunlight"; change "in the warehouse" to "place" (see Chapter 8, Chapter 7 of 1991) chapter).

This standard was proposed by the China National Textile and Apparel Council.

This standard is under the jurisdiction of Shanghai Textile Industry Technical Supervision.

This standard was drafted. Changzhou Lingda Special Fiber Co., Ltd., China Chemical Fiber Industry Association, Shanghai Textile Industry Technology Supervision Supervisor.

1 Scope

This standard specifies the terms and definitions of polypropylene expanded filament (hereinafter referred to as polypropylene BCF), product identification, technical requirements, test methods, Inspection rules and signs, packaging, transportation, storage.

This standard applies to linear density of 800dtex~3800dtex, cross-sectional shape is trilobal and triangular, with light, extinction, true color and Color polypropylene BCF quality verification and acceptance. Other shaped cross-section polypropylene BCF can also be used as reference.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this

document.

GB/T 250 Textile color fastness test for gray color card for color change GB/T 2828.1-2003 - Sampling procedures for sampling by sampling - Part 1 . Batch-to-batch inspections by Retrieving Quality of Acceptance (AQL) plan Textiles and textiles - Performance and test terms - Part 1. Fibers and yarns GB/T 3291.3 Textiles and textile materials - Performance and test terms - Part 3 GB/T 4146.1 Textile chemical fiber - Part 1. Generic name GB/T 4146.3 Textile chemical fibres - Part 3. Test terms GB/T 6502 chemical fiber filament sampling method GB/T 6503 chemical fiber moisture regain test method GB/T 6504 chemical fiber oil content test method GB/T 6505 chemical fiber filament heat shrinkage test method GB/T 8170 Numerical Rounding Rules and Representation and Determination of Limit Values GB 9994 textile material official moisture regain GB/T 14343 chemical fiber filament density test method GB/T 14344 Test method for tensile properties of chemical fiber filaments FZ/T 50001 synthetic fiber filament network test method

3 Terms and definitions

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

Expanded filament (BCF) bulkedcontinuousfilament yarn Expanded filaments produced by spinning, drawing, and deformation.

Heat curl elongation (CEAH) crimpelongationafterheating After heat treatment under specified conditions, it is loaded by a specified loading procedure, according to the length of the bulked filament when the load is increased and the light load is applied.

The percentage of the difference between the initial length and the initial length is calculated as the thermal curl elongation.

4 Product identification

Specifications are expressed in terms of linear density (dtex) and number of filaments (f).

Example. Polypropylene BCF with a multifilament thread density of 1150 dtex and a number of filaments of 80. Its product specification is 1150 dtex/80f polypropylene expanded filament.

(BCF).

5.1 Product Classification

The product grade is divided into three grades. superior grade, first grade, and qualified grade, and the lower grade is lower than the qualified one.

5.2 Physical performance items and indicator values

Physical performance items and indicator values are shown in Table 1.

Table 1 Physical performance items and indicator values

No. Item Excellent Item First Class Qualified Product

1 Linear density deviation rate /% ± 3.0 3.5 4.5

2 Linear density coefficient of variation (CVb value) /% ≤ 3.00 3.50 4.50 3 breaking strength/(cN/dtex) ≥ 1.85 1.65 1.50 4 coefficient of variation of breaking strength (CVb value) /% ≤ 6.00 8.00 10.00

5 Elongation at break /% M1a ± 10.0 M1a ± 15.0 M1a ± 20.0

6 Elongation at break coefficient of variation (CVb value) /% ≤ 15.00

-

7 boiling water shrinkage /% ≤ 3.50 4.00 5.00

8 Thermal curl elongation /% $\geq$

6 Test methods

6.1 Linear density test Execute according to GB/T 14343.

6.2 Test of breaking strength and elongation at break Execute according to GB/T 14344.

6.3 boiling water shrinkage test Execute according to GB/T 6505.

6.4 Thermal curl elongation test Execute as specified in Appendix B.

6.5 Network degree test Execute according to FZ/T 50001 regulations.

6.6 Oil content test Execute according to GB/T 6504.

6.7 moisture regain test Execute according to GB/T 6503.

6.8 barrel weight

The weight of the package is weighed by the weighing scale, electronic scale and other weighing instruments of the appropriate weighing range. After deducting the known skin quality, the net mass is for the weight of the barrel, accurate to 0.5%, and recorded.

6.9 Appearance inspection Performed in accordance with Appendix A.

7 Inspection rules

7.1 Factory inspection

7.1.1 Inspection items