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

FZ/T 50011-2016

Replacing FZ/T 50011-1999

**Synthetic filament yarns - Test method for residual torque of
false-twist textured yarns**

合成纤维 假捻变形丝残余扭矩试验方法

(English Translation)

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Foreword

This document was issued on 22 October 2016 by the Ministry of Industry and Information Technology of the People's Republic of China, and has applied since 1 April 2017.

It is an FZ/T standard: a recommended industry standard of China's textile industry.

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

This standard replaces FZ/T 50011-1999, Test method for residual torque of false twisted textured yarns. The main changes with respect to FZ/T 50011-1999 are as follows:

- the scope is modified (see Clause 1; Clause 1 of the 1999 edition);
- the clauses are rearranged and a Normative references clause is added (see Clause 2);
- the definitions of residual torque and twist direction are modified and English terms are added (see Clause 3; Clause 3 of the 1999 edition);
- a definition of twist count per unit length is added (see Clause 3);
- the standard atmosphere for conditioning and testing is modified (see Clause 5; Clause 6 of the 1999 edition);
- the number of specimens and of tests is modified (see Clause 6; Clause 4 of the 1999 edition);
- the original method is moved to Annex A (informative), keeping its main technical content, with the apparatus and the test procedure revised (see Annex A; Clauses 5 and 7 of the 1999 edition);
- test methods A and B are added (see Clause 7).

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

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

1 Scope

This standard specifies three test methods for the residual torque of false-twist textured yarns: Method A, the instrument method; Method B, the manual method; and the twist distance method given in Annex A. Method A is the arbitration method.

This standard applies to false-twist textured yarns.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition (including any amendments) applies.

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

GB/T 4146.3 Textiles - Man-made fibres - Part 3: Test terms

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

GB 9994 Conventional moisture regains of textile materials

GB/T 14343 Test method for linear density of man-made filament yarns

QB/T 1149 Paper clips

3 Terms and definitions

For the purposes of this document, the terms and definitions given in GB/T 4146.1 and GB/T 4146.3 and the following apply.

3.1

residual torque

torsional stress remaining in a false-twist textured yarn, expressed by its twist count, twist count per unit length and twist direction

3.2

twist count

number of turns by which a false-twist textured yarn twists back on itself, one turn being a rotation of 360° about its axis

3.3

twist count per unit length

number of twists produced by the torsional stress in a unit length of false-twist textured yarn

3.4

twist direction

direction in which a false-twist textured yarn twists under its torsional stress, expressed as S twist or Z twist

4 Principle

A length of textured yarn is folded and suspended vertically with a load at the fold. Under its torsional stress the yarn twists back on itself; when it stops rotating, the number of turns is counted and the twist count per unit length is calculated.

The residual torque of the textured yarn is characterized by the twist count, the twist count per unit length and the twist direction.