

ICS 59.080.20
CCS W 40

FZ

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

FZ/T 40003-2021

**Test method for mulberry spun silk yarn
(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 Inspection rules
 - 3.1 Batch
 - 3.2 Sampling method

Foreword

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

This standard replaces FZ/T 40003-2010 "Mulberry silkworm silk test method", compared with FZ/T 40003-2010, the main technical changes as follows.

- Revised the scope of application (see Chapter 1, Chapter 1 of the 2010 edition);
- Added normative reference documents (see Chapter 2, Chapter 2 of the 2010 edition);
- Modified the textual description of the group batching (see 3.1.2, 3.1.2, 3.1.3 of the 2010 edition);
- Added the sampling regulations for the appearance inspection of twisted mulberry silk (see 3.3.1, 3.3.1 of the 2010 edition);
- Revised the sampling regulations for weight inspection samples (see 3.3.2, 3.3.2 of the 2010 edition);
- Modify the "count inspection" to "line density inspection" and "break length" to "breaking strength" (see 4.1.1, 2010 edition 4.1.1);
- Modified the lighting requirements for appearance inspection and changed to FZ/T 40010 (see 4.1.2.1.2, 4.1.2.1.2 of the 2010 edition);
- Revised the visual inspection procedures (see 4.1.2.2.2, 4.1.2.2.2 of the 2010 edition);
- The calculation formula of the average linear density has been added [see formula (1)];
- Modified the calculation formula of linear density inspection [see formulas (2), (3), (4), formulas (1), (2), (3) in the 2010 edition];
- Modified the calculation formula of twist test [see formulas (5), (6), (7), formulas (4), (5), (6) in the 2010 edition];

- Modify the "break length" calculation formula to "break strength" calculation formula [see formula (9), formula (8) in the 2010 edition];
- Blackboard darkroom requires direct use of FZ/T 40008-2016 (see 4.1.7.1, 4.1.7.1.4 of the 2010 edition);
- The lighting requirements for the inspection of the evenness of the strips are changed to "Perform according to 2.2.3 of FZ/T 40008-2016" (see 4.1.7.2.1, 2010 edition 4.1.7.2.1);
- Cleanliness inspection lighting requirements are changed to "FZ/T 40008-2016 2.2.2 implementation" (see 4.1.7.3.1, 2010 edition 4.1.7.3.1);
- Modified the evaluation content of the test results of evenness of the evenness (see 4.1.7.2.3, 4.1.7.2.3 of the 2010 edition);
- Modified the content of cleanliness inspection result evaluation (see 4.1.7.3.3, 4.1.7.3.3 of the 2010 edition);
- The test method of training reduction rate is changed to directly adopt GB/T 32015 (see 4.1.9, 4.1.9 of the 2010 edition);
- Added wet weight and dry weight inspection content (see 4.2.2.2, 4.2.2.3);
- Modified the content of the actual moisture regain inspection (see 4.2.2.4, 4.2.2.2, 4.2.2.3 of the 2010 edition);
- Deleted Appendix A (see Appendix A of the 2010 edition).

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

This standard is under the jurisdiction of the National Silk Standardization Technical Committee (SAC/TC401).

Drafting organizations of this standard. Hangzhou Customs Technology Center, Zhejiang Silk Technology Co., Ltd., Anqing Qingyi Precision Spinning Co., Ltd., Jiangsu Susi Silk Co., Ltd., Dali Silk (Zhejiang) Co., Ltd., Shaoxing Miaomeng Cultural and Creative Co., Ltd., Zhejiang Golden Eagle Spun Silk Co., Ltd.

Division, Zhejiang Institute of Standardization, Xinyuan Cocoon Silk Group Co., Ltd.

1 Scope

This standard specifies the inspection rules and test methods for skeined and tube-packed mulberry silk.

This standard applies to singeed mulberry silk, other mulberry silk and mulberry silk and other textile fiber blended spun silk can be implemented by reference.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article Pieces. For undated reference documents, the latest version (including all amendments) is applicable to this document.

GB/T 250 Gray Sample Card for Textile Color Fastness Test Evaluation GB/T 2543.1 Determination of yarn twist in textiles Part 1: Direct counting method GB/T 3292.1 Textile yarn unevenness test method Part 1: Capacitance method GB/T 3916 Determination of breaking strength and breaking elongation of single yarn of textile package yarn (CRE method) GB/T 4743 Determination of hank method linear density of textile package yarn GB/T 6529 Standard atmosphere for textile humidity control and testing GB/T 8170 Numerical rounding rules and the expression and determination of limit values GB/T 9995 Determination of moisture content and moisture regain of textile materials Oven drying method GB/T 32015 Test method for silk reduction rate FZ/T 01050 Classification and Inspection Method of Textile Yarn Defects Capacitive Type FZ/T 40008-2016 Technical requirements for darkroom for inspection of silk blackboard FZ/T 40010 Technical Specification for Silk Appearance Inspection Facilities FZ/T 42002-2020 Mulberry silk GSB11-3604 Standard sample photo of mulberry silk

3.1 Batch

3.1.1

The mulberry silk yarn is a batch of products of the same variety, the same specification, and the same production process.

3.1.2

The mulberry silk yarn is about 1000kg per batch, and the twisted silk is 40 boxes (about 25kg per box) or 20 pieces (about 50kg per piece) as a batch, and the drum is packed.

The silk takes 33 to 34 boxes (about 30kg per box) or 20 boxes (about 50kg per box) as a batch. Insufficient boxes and pieces shall still be counted as one batch.

3.2 Sampling method

The tested mulberry silk yarn shall be taken with representative weight and quality inspection samples at the same time as the appearance inspection. The sample should be in the same batch of mulberry the silkworm silk is randomly selected and spread across the upper, middle and lower layers of each piece (box).