

ICS 59.080.30

CCS W 04



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 3923.2-2013

**Textiles -- Tensile properties of fabrics -- Part 2: Determination
of maximum force using the grab method**

(English Translation)

Issued on: October 10, 2013

Implemented on: May 1, 2014

**Issued by: General Administration for Quality Supervision, Inspection
and Quarantine (AQSIQ)**

Table of Contents

Foreword...	3
1 Scope...	5
2 Normative References...	5
3 Terms and Definitions...	6
4 Principle...	6
5 Sampling...	6
6 Apparatus...	7
7 Atmosphere for Conditioning and Testing...	8
8 Preparation of Test Specimens...	8
9 Procedure...	9
10 Calculation and Expression of Results...	10
11 Test Report...	11
Appendix A...	12
Appendix B...	13
Appendix C...	15

Foreword

GB/T 3923 consists of the following parts, under the general title "Textiles - Tensile properties of fabrics".

- Part 1. Determination of maximum force and elongation at maximum force using the strip method;

- Part 2. Determination of maximum force using the grab method.

This Part is Part 2 of GB/T 3923.

This Part was drafted according to the rules specified in GB/T 1.1-2009.

This Part replaces GB/T 3923.2-1998 "Textiles - Tensile properties of fabrics - Part 2. Determination of breaking force - Grab method". Compared with GB/T 3923.2-1998, the main technical changes in this Part are as follows.

- In Chapter 2 "Normative References", GB/T 8170 was deleted; GB/T 6682, GB/T

16825.1 and GB/T 19022 were added;

- Add 3.1 and the note of 3.4;
- The provision of laboratory sampling (8.1) was integrated into Chapter 5;
- Test specimen "length shall not less than 150 mm" in 8.2 was changed into "length shall be long enough to secure the gauge length of 100 mm";
- 8.2 was divided into 8.2 and 8.3; and the location of index line was changed from "37.5 mm" into 38 mm;
- Add gauge length 75 mm in 9.1;
- Schematic diagram of sample clamping in 9.3 was deleted;
- The requirements of "round the results for values" in 10.1 was modified; and add "if required" in 10.2 and 10.3.

This Part was redrafted based on ISO 13934-2:1999 "Textiles - Tensile properties of fabrics - Part 2. Determination of maximum force using the grab method" (English edition).

The main differences between this Part and ISO 13934-2:1999 are as follows.

- Foreword, introduction and bibliography of the international standard were deleted;
- Chapter 1 "Scope" was modified;
- The international standards and European Union standards specified in Normative References are replaced by corresponding national standards of China;
- The note of 3.4 was modified;
- Subclause of 6.1 was replaced by inclusion of items;
- Chapter 10 was divided into 3 subclauses; add note of 10.1 and equation (1).

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

This Part shall be under the jurisdiction of Subcommittee on Basic Standard the National Technical Committee 209 on Textiles of Standardization Administration of China (SAC/TC 209/SC 1).

Drafting organizations of this Part. CTS (Beijing) Textile Testing & Certification Services and National Textile Quality Supervision Testing Center.

Chief drafting staffs of this Part. Liu Ming, Zheng Yuying, Wang Ying and Li Yafeng.

The previous editions replaced by this Part are as follows.

- GB/T 11050-1989;

- GB/T 3923.2-1998.

Textiles - Tensile Properties of Fabrics - Part 2.

Determination of Maximum Force Using the Grab

Method

1 Scope

This Part of GB/T 3923 specifies a procedure for the determination of maximum force of textile fabrics known as the grab test.

The method is mainly applicable to woven textile fabrics. It may be applicable to fabrics produced by other techniques. It is normally not applicable to woven elastic fabrics, geotextiles, nonwovens, coated fabrics, textile-glass woven fabrics and fabrics made from carbon fibres or polyolefin tape yarn.

The method specifies the determination of the maximum force of test specimens in equilibrium with the standard atmosphere for testing and of test specimens in the wet state.

The method is restricted to the use of constant rate of extension (CRE) testing machines.

2 Normative References

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

GB/T 6529 Textiles - Standard atmospheres for conditioning and testing (GB/T 6529-2008, ISO 139.2005, MOD)

GB/T 6682 Water for analytical laboratory use - Specification and test methods (GB/T

6682-2008, ISO 3696.1987, MOD)

GB/T 16825.1 Verification of static uniaxial testing machines - Part 1. Tension / compression testing machines - Verification and calibration of the force-measuring system (GB/T 16825.1-2008, ISO 7500-1.2004, IDT)

GB/T 19022 Measurement management systems - Requirements for measurement processes and measuring equipment (GB/T 19022-2003, ISO 10012.2003, IDT)

- One clamp (25 mm) x (40 mm min., preferably 50 mm), positioned with the wider direction of the clamp perpendicular to the line of application of the force; a second clamp of the same dimensions positioned perpendicular to the first so that the wider direction of the clamp is parallel to the direction of application of the force.

- One clamp (25 mm) x (40 mm min., preferably 50 mm), positioned with the wider direction of the clamp perpendicular to the line of application of the force; a second clamp 25 mm x 25 mm.

6.3 Equipment in which test specimens can be immersed in water preparatory to wet

testing.

7 Atmosphere for Conditioning and Testing

The atmospheres for preconditioning, conditioning and testing shall be as specified in GB/T 6529.

Note: It is recommended that samples are conditioned for at least 24 h in the relaxed state.

Preconditioning and conditioning are not required for tests in the wet condition.

8.1 General

From each laboratory sample two sets of test specimens shall be cut, one set in the warp direction and the other in the weft direction (or in the machine and cross-machine directions, where applicable).

Each set shall consist of at least five test specimens, except that if a higher degree of precision is required, more test specimens shall be tested. In accordance with Chapter