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

GB/T 15788-2017

Replacing GB/T 15788-2005

**Geosynthetics -- Wide-width tensile test
(English Translation)**

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Foreword

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

This standard replaces GB/T 15788-2005 "geotextile and related products wide strip tensile test." This standard and GB/T 15788-2005 compared to the main differences are as follows.

- Standard name of "geotextile and related products" changed to "geosynthetics";
- Expand the scope of the standard, an increase of geotextiles, and metal fiber fabric products (see Chapter 1, 2005 edition Chapter 1);
- Removed references to GB/T 3361 (see the 2005 edition of Chapter 2);
- Added reference to GB/T 13759 and GB/T 16989 (see Chapter 2);
- Added some terminology symbols, an increase of 3.7 nominal strength of the definition of elongation, the 3.1 and 3.3 "clamping length" repair to "gauge length", the deletion of column 3.1 in subparagraph (2), replacing the information for units of volume with the corresponding note (see Chapter 3, Chapter 3 of the 2005 edition);
- Increasing the bimodal geosynthetic typical tensile curve example (see Figure 2);
- Increasing the rate of elongation of low-stretch products to set the method, and removed by the jaw displacement measured elongation (see Chapter 4, 2005 edition of Chapter 4);
- Simplified clamping surface type (see Figure 3, 2005 version of Figure 2);
- Specifies the type of distilled water and non-ionic wetting agent (see 5.3 and 5.4, 2005 Edition 5.3 and 5.4);
- Refinement of the sample size and the increase of the icon (see 6.3.1-6.3.6, 2005 edition 6.3.1 ~ 6.3.3);
- Remove the recommended $(23 \pm 2) ^\circ\text{C}$ and $(27 \pm 2) ^\circ\text{C}$ two water temperature (see 2005 version of 7.2);
- Increasing the calculation of elongation at nominal strength (see 9.3);

--- Chapter 10 adds the column e) "When needed, respectively, given the vertical and horizontal nominal strength of the average elongation, if necessary, according to Chapter 9 provides the single value "and h)" the sample state, such as dry or wet state, "the deletion of the column i)" test machine type and test Range "(see Chapter 10, Chapter 10 of the 2005 edition);

--- Increased for the determination of twisted hexagonal wire mesh tensile strength of the informative annex (see Appendix A).

This standard uses redrafted law revision using ISO 10319:2015 "geosynthetics wide strip tensile test." This standard and ISO 10319:2015 compared to the structure has been modified, the specific adjustments are as follows.

--- 6.3.6 in paragraph 5 alone as 6.3.8;

--- The exchange of ISO 10319:2015 Chapter 10 of the item m) and the order o).

This standard and ISO 10319:2015 technical differences and the reasons are as follows.

--- Removed the scope of ISO 10319:2015 second paragraph "also pointed out that the strong point on the elongation curve";

--- On normative references, this standard made a technical difference with the adjustment to adapt to China's technical conditions, adjust the situation Concentration reflected in the second chapter "Normative references", the specific adjustments are as follows.

- Replacing ISO 554 with International Standard GB/T 6529 (see 7.1);
- ISO 3696 (see 5.3) replaced by GB/T 6682 modified to adopt international standards;
- Replace ISO 10318 with GB/T 13759 equivalent to international standards (see Chapter 3);
- Replace ISO 9862 with GB/T 13760 equivalent to the international standard (see 6.2);
- Replace ISO 7500-1 with GB/T 16825.1 equivalent to international standards (see 5.1);
- Replaced ISO 10321 with modified GB/T 16989 using international standards (see 6.3.8);
- Removed the reference to EN10223-3 and wrote the relevant contents in Appendix A of this standard;

--- Replace the information for units of quantity in 3.3 of ISO 10319:2015 with the corresponding note;

--- ISO 10319:2015 3.4 "maximumtensileforce" revised to "maximumtensileload", and context Uniformity, modification of 3.5 "Elongation" definition, deletion of 3.10 "Strain rate" terms and their definitions, increase of operational Sex, easy to standard implementation;

--- Added 9.2 Chinese (4), followed by the formula serial number, while increasing the 9.5

"average and coefficient of variation", clear experimental results Fruit expression.

For ease of use, the following editorial changes have been made to ISO 10319:2015.

--- Added information Appendix A "Twist and hexagonal wire mesh tensile test method" and the ISO 10319:2015 6.3.6 test Twisted hexagonal wire mesh tensile strength of the content adjusted to the appendix.

This standard proposed by the China Textile Industry Federation.

This standard by the National Textile Standardization Technical Committee (SAC/TC209) centralized.

This standard was drafted. Textile Standard Test Certification Co., Ltd., the State Textile Quality Supervision and Inspection Center, Jinjiang Textile Testing Limited company.

1 Scope

This standard specifies the use of wide strip specimens geosynthetics (polymer, glass fiber and metal) tensile properties of the method.

This standard applies to most geosynthetics, including woven geotextile, non-woven geotextiles, knitted geotextiles, geocomposites, Geotextiles, and metal fiber products, but also geogrids and similar geotextile mesh structure, but the sample size may be required to adjust. This standard does not apply to polymer or asphalt impermeable geomembrane, but for clay impermeable geomembrane.

The tensile test method includes the determination of strength and elongation characteristics, as well as the secant modulus, the maximum load per unit width and the maximum strength stretch the length of the calculation steps.

This standard includes the determination of humidity and wetting two specimens tensile properties of the program.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 6529 conditioning and testing of textiles standard atmosphere (GB/T 6529-2008, ISO 139:2005, MOD) GB/T 6682 analytical laboratory water specifications and test methods (GB/T 6682-2008, ISO 3696:1987, MOD) GB/T 13759 Geosynthetics terms and definitions (GB/T 13759-2009, ISO 10318:2005, IDT) GB/T 13760 Geosynthetics sampling and sample preparation (GB/T 13760-2009, ISO 9862:2005, IDT) GB/T 16825.1 static uniaxial testing machine test Part 1. Tensile and (or) testing machine force testing system and the school Standard (GB/T 16825.1-2008, ISO 7500-1:2004, IDT) Geosynthetics joint/joint wide

strip tensile test method (GB/T 16989-2013, ISO 10321.

2008, MOD)

3 Terms and definitions

GB/T 13759 defined and the following terms and definitions apply to this document.

Nominal gauge length the initial distance between the two marks parallel to the direction of applied load on the specimen, typically 60 mm (both sides from the center of symmetry of the specimen 30mm).

Preload elongation elongationatpreload the increase in gauge length (mm) measured at an applied load equivalent to 1% of the maximum load.

Note: For preload extension see SA in Figure 1.

Actual gauge length truegauge length L_0 Nominal gauge length (3.1) and the preload elongation (3.2) and.

Note The actual gauge length in millimeters (mm).