

ICS 59.080.70

CCS W 04



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

GB/T 15789-2016

Replacing GB/T 15789-2005

**Geotextiles and geotextile-related products -- Determination of
water permeability characteristics normal to the plane, without
load**

土工布及其有关产品 无负荷时垂直渗透特性的测定

(English Translation)

Issued on: December 13, 2016

Implemented on: July 1, 2017

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People 's Republic of China**

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Foreword

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

This standard replaces GB/T 15789-2005 "Determination of Vertical Permeability of Geotextiles and Related Products without Load", and GB/T 15789-2005 compared to the main technical changes are as follows.

Update the reference standard information;

--- flow rate index VIH50 simplified to VH50;

--- adjustment 4.3, 6.2.1a), 6.2.2a), 6.4.2 "note" as the standard text;

--- 5.2.6 The accuracy of the cylinder is changed from 10cm³ to 1% of the measuring range, and if the flow rate is calculated by the volume of water, Accurate to 1% of the measuring range of the cylinder; if the flow rate is calculated by the mass of the water, it should be accurate to 1% - 5.3.4 What's New "If the flow rate is calculated by the volume of water, the size of the cylinder should not exceed twice the volume of the collected water"

--- 6.2.4 in the "head accurate to 1mm" modified to "head accurate to 3%";

- increase by 5.4.5 and 6.4.5;

- append Appendix C, Appendix C to Appendix D.

This standard uses the re-drafting method to modify ISO 11058.:2010 "geotextile and its related products without load when the vertical penetration characteristics of the determination ".

The technical differences between this standard and ISO 11058.:2010 are as follows.

--- to increase the scope of application of the standard, to facilitate the reader to determine

whether the use of the method.

--- on the normative reference documents, the standard made a specific technical differences in the adjustment to meet China's technical conditions, adjust the situation the situation is reflected in Chapter 2, "Normative references", as follows.

Replace GB 2854 with international standard GB/T 4889 (see 4.3);

Replace GB 5813 (see 5.2.3 and 6.2.3) with GB/T 7489 with an international standard;

Replace GB 9862 (see 4.2) with GB/T 13760 equivalent to international standards;

- replace ISO 10320 [see 7c) with GB/T 14798 equivalent to the international standard.

--- Added 3.1 terms and definitions of the note, note the increase in the head of the optional range, so that the 3.1 definition more in line with the standard content.

--- 5.2.4 in the "stopwatch accurate to 0.2s" modified to "stopwatch accurate to 0.1s", so that the results recorded more accurate.

--- 5.2.5 in the "thermometer accurate to 0.5 °C" modified to "thermometer accurate to 0.2 °C", so that the results recorded more accurate.

--- 5.3.6 in the "water temperature accurate to 0.5 °C" modified to "water temperature accurate to 0.2 °C", so that the results recorded more accurate.

- Calculate the coefficient of variation in 5.4.3 and 6.4.3 to verify the stability of the test data to ensure the accuracy of the results.

--- increased 5.4.4 and 5.4.5, permeability coefficient and permeability is a measure of geotextile permeability of the important indicators, the value reflects the water the ability to geotextile.

--- 6.2.5 "Thermometer accurate to 0.5 °C" modified to "thermometer accurate to 0.2 °C" to record the results more accurate.

--- 6.3.5 "water temperature accurate to 0.5 °C" modified to "water temperature accurate to 0.2 °C", so that the results recorded more accurate.

--- increased 6.4.4 and 6.4.5, permeability coefficient and permeability is a measure of geotextile permeability of the important indicators, the value reflects the water the ability to geotextile.

This standard is proposed by China Textile Industry Federation.

This standard is under the jurisdiction of the National Textile Standardization Technical Committee (SAC/TC209).

The drafting unit of this standard. National Textile Products Quality Supervision and Inspection Center, Textile Industry Standardization Institute, Hongxiang new materials

limited Company, Shanghai Survey and Design Institute.

1 Scope

This standard specifies two methods of measuring the vertical permeability of geotextiles and their related products in a single layer. constant head method and descending head method.

This standard applies to all types of geotextiles and their related products, but does not apply to the composite materials containing film materials.

Note: If the overall penetration of the geotextile and its related products has been pre-determined, in order to control the quality of the material, only 50mm head flow Speed index.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article Pieces. For undated references, the latest edition (including all modifications) applies to this document.

GB/T 4889 Statistical analysis and interpretation of data The estimation and testing of mean and variance of normal distribution (GB/T 4889-2008, ISO 2854. 1976, MOD) GB/T 7489 Determination of dissolved oxygen in water (I/O 7) GB/T 13760 Geosynthetics Sampling and sample preparation (GB/T 13760-2009, ISO 9862.:2005, IDT) GB/T 14798 Geosynthetics Field identification (GB/T 14798-2008, ISO 10320.:1999, IDT)

3 Terms and definitions

The following terms and definitions apply to this document.

Flow velocity index

VH50

Samples on both sides of the head when the difference is 50mm when the flow rate, accurate to 1mm/s.

Note: You can also take 100mm, 150mm and other head when the difference between the flow rate, and VHn said (n for the above a head difference value).

4.1 Release requirements

The sample shall not be folded and minimize the number of times taken to avoid affecting its structure. The sample shall be placed in a flat place and no pressure shall be applied.

4.2 Sampling

The sample was taken from the sample according to GB/T 13760.

4.3 Quantity and size

Five samples were cut from the sample and the sample size was adapted to the test apparatus.