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

GB/T 12703.8-2020

**Textiles. Test methods for electrostatic propensity - Part 8: Test
method using horizontal mechanical friction**

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Foreword

This document is in accordance with the provisions of GB/T 1:1-2020 Standardization Guidelines Part 1: Structure and Drafting Rules of Standardization Documents

Drafting:

This document is Part 8 of GB/T 12703 "Test Methods for Electrostatic Properties of Textiles": GB/T 12703 has released the following

section:

---Part 1: Corona charging method;

---Part 2: Manual friction method;

---Part 3: The amount of charge;

---Part 4: Resistivity;

---Part 5: Rotating machinery friction method;

---Part 6: Fiber leakage resistance;

---Part 7: Dynamic static voltage;

---Part 8: Horizontal mechanical friction method:

This document uses the redrafting method to modify the ISO 18080-4:2015 "Test Methods for the Evaluation of Textile Electrostatic Properties, Part 4"

Sub: Horizontal Mechanical Friction Method:

The main technical differences between this document and ISO 18080-4:2015 and the reasons are as follows:

---Regarding normative reference documents, this document has made adjustments with technical differences to adapt to my country's technical conditions and adjustments:

The situation is collectively reflected in Chapter 2 "Normative Reference Documents", and the specific adjustments are as follows:

- * Replace ISO 105-F01 (see 6:4) with GB/T 7568:1 modified to adopt international standards;
 - * Replace ISO 105-F02 with GB/T 7568:2 (see 6:3);
 - * Replace ISO 6330:2012 (see 8:2:2) with GB/T 8629-2017 modified to adopt international standards;
 - * Replace ISO 3175-2 (see 8:2:3) with GB/T 19981:2 modified to adopt international standards;
 - * Replace ISO 3175-3 (see 8:2:3) with GB/T 19981:3 which is equivalent to the international standard:
- Modify the "humidity control at least 24h" in 8:3 to "humidity control balance" to increase the applicability of the standard:

This document has made the following editorial changes:

- Amend the standard name to "Textile Electrostatic Performance Test Method Part 8: Horizontal Mechanical Friction Method";
- Change the second paragraph in the scope of Chapter 1 of the original ISO document to the content of the note;
- Modify ISO 139 in the note of Chapter 5 to GB/T 6529 to adapt to my country's technical conditions;
- Clarified 8:2:2 washing machine and detergent type;
- Clarified the test surface of the sample in 9:1;
- Revised "9:3~9:13" in 9:14 to "9:1~9:13" to make the expression more accurate, and at the same time clarified the amendment provisions, and added "test

The results are shown in Appendix A", which leads to Appendix A;

- A:2 and A:3 in Appendix A have been deleted, and the subsequent clause numbers have been extended;
- Corrected the triboelectric voltage value of sample B in A:3:

Please note that certain contents of this document may involve patents: The issuing agency of this document is not responsible for identifying patents:

This document was proposed by China National Textile and Apparel Council:

This document is under the jurisdiction of the National Textile Standardization Technical

Committee (SAC/TC209):

Introduction

In addition to the electrostatic safety hazards and the damage and interference to sensitive electronic equipment and systems that have been included in other documents, the static electricity of clothing will also

Cause problems such as adhesion, uncomfortable electric shock, adsorption of dust and other pollutants in the air:

In some fast-developing industries related to precision technology, biotechnology, food, hygiene, etc., clothing is required to avoid air dust pollution

At the same time, the wearer usually hopes that the clothing will not stick to the skin or produce uncomfortable electric shocks:

Many national and international standards, including ISO and IEC , have standards on electrostatic performance testing, which are used to guide clothing design:

To avoid problems caused by static electricity: However, the relationship between the measured electrostatic performance and the end-use performance is more complicated and may require

Use different methods for testing according to the actual situation of the application:

This document is one of the testing methods for the electrostatic properties of textile materials:

This document is based on the test of static electricity generated by friction: Friction is one of the main static electricity generating mechanisms in clothing in actual wear: although

The test methods specified in GB/T 12703:2 and GB/T 12703:5 are based on the friction mechanism, but due to the actual friction mode

They are different, so the test results cannot be directly compared:

Textile electrostatic performance test method

Part 8: Horizontal mechanical friction method

1 Scope

This document specifies the method for measuring the frictional charging voltage and voltage half-life of fabrics using the horizontal mechanical friction method:

This document applies to fabrics of various compositions and structures that can withstand frictional charging operations:

This document is not applicable to the evaluation of clothing and clothing materials related

to personal safety and protection of electrostatic discharge sensitive devices:

Note: Some fabrics, such as fabrics with low strength or loose structure, may not be able to withstand the friction operation in this method, or may produce erroneous test results:

In this case, the method specified in GB/T 12703:1 can be used for testing:

2 Normative references

The contents of the following documents constitute indispensable clauses of this document through normative references in the text: Among them, dated quotations

Only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

This document:

GB/T 7568:1 Textile color fastness test wool standard lining fabric specifications (GB/T 7568:1-2002, ISO 105-F01:

2001, MOD)

GB/T 7568:2 Textile Color Fastness Test Standard Laminated Fabric Part 2: Cotton and Viscose Fiber

GB/T 8629-2017 Domestic washing and drying procedures for textile testing (ISO 6330:2012, MOD)

GB/T 19981:2 Professional maintenance, dry cleaning and wet cleaning of textile fabrics and clothing Part 2: Dry cleaning and wet cleaning using perchloroethylene

Procedure for performance test during ironing (GB/T 19981:2-2014, ISO 3175-2:2010, MOD)

GB/T 19981:3 Professional maintenance, dry cleaning and wet cleaning of textile fabrics and garments Part 3: Dry cleaning and wet cleaning using hydrocarbon solvents

Procedure for performance test during ironing (GB/T 19981:3-2009, ISO 3175-3:2003, IDT)

3 Terms and definitions

The following terms and definitions apply to this document:

3:1

Antistatic

The material has the ability to reduce the tendency to obtain electrostatic charge or to make the electrostatic charge quickly dissipate:

3:2