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

GB/T 5456-2009

Replacing GB/T 5456-1997

**Textiles -- Burning behaviour -- Flame spread properties of
vertically oriented specimens**

纺织品 燃烧性能 垂直方向试样火焰蔓延性能的测定

(English Translation)

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Foreword

This standard is modified using the international standard ISO 6941.:2003 "Textile fabric combustion performance Vertical direction sample flame spread performance Determination ".

This standard is redrafted according to ISO 6941.:2003 and the main differences with ISO 6941.:2003 are as follows.

--- normative reference documents in the international standard replaced by the corresponding national standards, an increase of the reference document GB/T 6529.

--- the air conditioning in Chapter 8 of the atmosphere from the "temperature $20\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$, relative humidity $65\% \pm 5\%$ humidity 24h" to "in GB/T 6529 under the standard atmospheric conditions for humidity control. " - Added "note" in Chapter 10.

This standard replaces GB/T 5456-1997 "Determination of Flame Propagation Performance in Vertical Direction Specimen of Textile Flammability", mainly the change is as follows.

- the scope of application of the standard is simplified as "all kinds of single or multi-component (coating, Yan, multi-layer, sandwich products and similar combinations) of the textile Fabric and industrial products ".

- GB/T 8746 and GB/T 3291.3 were added to the normative reference document.

- In Chapter 3, the words "continued burning", "continued burning time", "smoldering" and "smoldering time" were added, adding "ignition time".

- in the principle of the deletion of "can also observe, measure and record the sample of other flame spread performance." - Added support for the support frame in equipment and materials.

--- increase the gas igniter level or tilt the location of the ignition when the tip of the distance

from the description of the sample.

- Change the "sample holder" to "sample frame" and modify the specification.
- Change the drilling description on the template to "Drill 12 holes with a diameter of about 4mm on the template".
- ignition gas source increased "propane/butane mixture gas".
- Change the mark line to "Line density 45tex to 50tex".

The size of the specimen is changed from (560 x 170) mm to (560 x 170) mm ± 2mm.

- the original standard in the three humidity conditions to a standard humidity control conditions, as "GB/T 6529 in the provisions of the standard atmospheric conditions Under the humidity control ".

--- Flame height adjustment mode from vertical adjustment to horizontal adjustment and vertical adjustment in two ways.

--- The provisions of the ignition time were modified.

- the recording of other burning properties of the fabric is canceled.

--- Added Chapter 11 "Precision".

Appendix A of this standard is a normative appendix, Appendix B is an informative appendix.

This standard is proposed by China Textile Industry Association.

This standard is under the jurisdiction of the National Standard Committee on Textile Standardization Technical Standards (SAC/TC209/SC1).

The drafting of this standard. Shanghai Entry-Exit Inspection and Quarantine Bureau, Textile Standardization Institute, Shanghai Aili Garment Inspection and Repair Co., Ltd.

1 Scope

This standard specifies the test method for the flame spread time in the vertical direction of the textile.

This standard applies to all kinds of single or multi-component (coating, quilting, multi-layer, sandwich products and similar combinations) of textile fabrics and industrial use Products.

2 Normative reference documents

The terms of the following documents are hereby incorporated by reference into this standard. Whichever is the date of the reference file, which is followed by all (Excluding corrigenda) or revisions do not apply to this standard, however, encourage the parties to

reach an agreement under this standard Whether you can use the latest version of these files. For undated references, the latest edition applies to this standard.

Textiles - Properties and test terms for textile and textile materials - Part 3. General purpose
GB/T GB/T 6529 Standard atmosphere for textiles for humidity control and testing (GB/T 6529-2008, ISO 139.:2005, MOD) GB/T 8746 Textiles - Combustion properties - Determination of easy ignitability in vertical direction (GB/T 8746-2009, ISO 6940. 2004, MOD)

3 Terms and definitions

GB/T 3291.3 and the following terms and definitions apply to this standard.

The time at which the flame of the ignition source is applied to the specimen.

The time required for the flame on the burning material to extend a certain distance or surface area, in seconds, under specified test conditions.

4 Principle

With the specified ignition of the flame, the vertical direction of the sample surface or the bottom edge of the ignition 10s. The flame was spread on the sample to three the time the mark line is used separately.

5.1 Support frame

Should be able to maintain the specified relative position between the igniter (5.2, see Fig. 1) and the specimen frame (5.3, see Fig. 2) (see Fig. 3).

The instrument can be loaded with three markings on the position shown in Figure 2 (see 5.7). Install a ring at the location of each marker line both sides of the specimen to the front surface of 1mm and 5mm. A chronograph (5.6.2) is installed at each ring.