

ICS 59.080.30

CCS W 04



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

GB/T 24120-2009

**Textiles - Determination of resistance to water and alcohol
solutions**

纺织品 抗乙醇水溶液性能的测定

Issued on: June 15, 2009

Implemented on: February 1, 2010

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine;
Standardization Administration of the PRC**

Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and Definitions
- 5 Safety Precautions

Foreword

The standard proposed by China Textile Industry Association. This standard by the National Standardization Technical Committee on Basic Standards Subcommittee Textiles (SAC/TC209/SC1) centralized. This standard is mainly drafted by: Textile Standard (Beijing) Co., Inspection and Certification Center. The main drafters of this standard. Zhou Shixiang. Determination of anti-ethanol solution properties of textiles

1 Scope

China's national method for determining the resistance of textiles to water and alcohol solutions. It specifies the test method for assessing how a fabric resists penetration by aqueous solutions of ethanol of varying concentration. The test measures repellency rather than waterproofness, and the reason it uses alcohol is that alcohol lowers surface tension. A repellent finish works by presenting a low-energy surface that a liquid will not wet, and whether a given liquid wets it depends on the surface tension of that liquid: water, with a high surface tension, is repelled by a modest finish, while a liquid of lower surface tension wets the same fabric readily. By offering a graded series of water-alcohol mixtures - from pure water down through increasing alcohol to solutions of quite low surface tension - and finding the strongest mixture the fabric still repels, the test converts a property that would otherwise be pass-or-fail into a scale. That scale is what a repellency claim is graded on, and it is a far more sensitive and discriminating measure than a water test alone. It matters most where the liquid a fabric will actually meet is not water: a medical gown faces blood and alcohol-based products, a workwear fabric faces oils and solvents, and a technical textile faces whatever the process contains. The method is quick and needs no apparatus beyond the graded solutions and a dropper: drops of successive solutions are placed on the fabric and observed for a fixed time, and the rating is the highest-numbered solution that does not wet it. The standard fixes the solution series, the drop size and placement, the observation time, the assessment criterion and the conditioning of the specimen. Issued on 15 June 2009 and in force since 1 February 2010.

This standard specifies the wetting and surface tension of different series of standard test

solution for testing and evaluation of anti-textile ethanol and other organic solvents
Standard Test Method for Performance of penetration. This standard applies to all textile fabrics.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. Undated document, the latest versions apply to this standard.

GB/T 6529 Textiles conditioning and testing using standard atmosphere (GB/T 6529-2008, ISO 139.2005, MOD)

3 Terms and Definitions

The following terms and definitions apply to this standard.

3.1 The highest number of stages within the specified time, so that the fabric is not wetting/penetration of the respective aqueous ethanol. Principle

4 Using aqueous ethanol having different surface tension of test solution consisting of a series of standards, the test specimen surface in dropwise, within a certain time, Observe the standard test solution droplets wetting and penetration of the surface of the sample, and to determine the anti-alcohol levels.

5 Safety Precautions

5.1 ethanol, methanol, isopropanol, and other organic solvents are toxic, especially toxic methanol, and may cause a fire. Laboratory should have Appropriate security protection, such as proper ventilation or protective mask.

5.2 In dealing with the liquid, should wear protective gloves and safety goggles or protective goggles.

5.3 Do not tested in an open flame or other sources of ignition exist. 6 equipment, reagents and materials

6.1 Ethanol, a chemical alcohol. NOTE. The parties agree that other agents may be methanol, isopropanol and the like be used.

6.2 deionized or distilled water.

6.3 dropper capacity of 60mL, with a plastic head dropper.

6.5 routine laboratory use gloves.

6.6 preparation of standard test solution according to Table 1, and indicate the appropriate number of levels.

chinastandards.org · PREVIEW