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

GB/T 38462-2020

Textiles - Nonwoven fabrics for isolation gowns

纺织品 隔离衣用非织造布

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1 Scope

China's national standard for the nonwoven fabrics used in isolation gowns. It specifies the product grading, the technical requirements, the test methods and the inspection rules. An isolation gown is worn to keep contamination from moving between a patient and a healthcare worker, and it sits below a surgical gown in the hierarchy of protection - which is exactly why grading is the first clause. A gown for routine ward use, one for a procedure with fluid exposure and one for an infectious isolation room need different barrier performance, and specifying a single level would either overprotect at unnecessary cost and discomfort or underprotect where it matters. This standard was published in 2020, in circumstances that made the distinction between grades a matter of national logistics rather than of textile engineering, and the requirements reflect what the fabric must do: resist liquid penetration, resist bacterial penetration, not shed, and remain wearable through a shift.

This Standard specifies the product grading, technical requirements, test methods, inspection rules, packaging, marking, storage and transportation of nonwoven fabrics for isolation gowns. This Standard applies to nonwoven fabrics for disposable isolation gowns worn by medical and visiting personnel.

2 Normative references

The following documents are indispensable for the application of this document. For the dated references, only the editions with the dates indicated are applicable to this document. For the undated references, the latest edition (including all the amendments) are applicable to this document.

GB/T 250 Textiles - Tests for colour fastness - Grey scale for assessing change in colour

GB/T 4666 Textiles - Fabrics - Determination of width and length

GB/T 7742.1 Textiles - Bursting properties of fabrics - Part 1: Hydraulic method for determination of bursting strength and bursting distension

GB/T 12703.4 Textile - Evaluation for electrostatic properties - Part 4: Resistivity

GB/T 12704.1-2009 Textiles - Test method for water-vapour transmission of fabrics - Part 1: Desiccant method

GB 15979-2002 Hygienic standard for disposable sanitary products

GB 19082-2009 Technical requirements for single-use protective clothing for medical use

GB/T 24218.1 Textiles - Test methods for nonwovens - Part 1: Determination of mass per unit area

GB/T 24218.3 Textiles - Test methods for nonwovens - Part 3: Determination of tensile strength and elongation (strip method)

GB/T 24218.16 Textiles - Test methods for nonwovens - Part 16: Determination of resistance to penetration by water (hydrostatic pressure)

GB/T 24218.17 Textiles - Test methods for nonwovens - Part 17: Determination of resistance to penetration by water (spray impact)

YY/T 0689-2008 Clothing for protection against contact with blood and body fluids - Determination of resistance of protective clothing materials to penetration by blood-borne pathogens - Test method using Phi-X174 bacteriophage

3 Product grading

Nonwoven fabrics for isolation gowns, according to their intrinsic quality requirements, are divided into grades I, II, III, and IV. The protective performance is gradually improved.

Note: Grade I - Isolation gowns generally used for purposes such as visiting, cleaning.

Grade II - Isolation gowns generally used for routine care and examination. Grade III -

Isolation gowns which are generally used when a patient has a certain amount of bleeding and fluid secretions. Grade IV - Reinforced isolation gowns which are generally used for prolonged or heavy exposure to patients' blood, body fluids, or for cleaning medical waste.

4 Technical requirements

4.1 Intrinsic quality The intrinsic quality of the nonwoven fabrics for isolation gowns shall comply with the provisions in Table 1.

Note: When more than two drops of water appear at a certain position during the test but do not affect the judgment of water drops in other parts, pressurization can be continued, until the end of the test.

5.4 The determination of resistance to microbial penetration shall be carried out in accordance with procedure A or procedure B of YY/T 0689-2008. The minimum value is used as the test result.

5.5 The determination of anti-synthetic blood penetration is conducted according to Appendix A of GB 19082-2009. The minimum value is used as the test result.

5.6 The determination of bursting strength is carried out according to GB/T 7742.1. The test area is

5.7 The determination of tensile strength is carried out in accordance with the provisions of GB/T 24218.3.

5.8 The determination of water-vapour transmission rate is performed according to the conditions in

a) of GB/T 12704.1-2009.

5.9 The determination of antistatic property (surface resistivity) is performed in accordance with GB/T 12703.4.

5.10 The determination of microorganisms is carried out in accordance with the provisions of Appendix B of GB 15979-2002.

5.11 The determination of width is in accordance with GB/T 4666.

5.12 The color difference is evaluated according to GB/T 250.

5.13 The inspection of appearance defects is mainly based on the front of the product. The inspection shall be carried out on a horizontal inspection table. USE normal daylight northern light or fluorescent lamp to illuminate. The table illumination is not less than 600 lx. The distance between the eyes and the table is about 60 cm.

6 Inspection rules

6.1 Provision for lot grouping The products of the same variety and the same specification according to the delivery lot number are regarded as one inspection lot.