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

GB/T 38014-2019

Textiles - Protective nonwoven fabrics for surgical use

纺织品 手术防护用非织造布

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1 Scope

China's national standard for the protective nonwoven fabrics used in surgery. It specifies the terms and definitions, the product classification, the technical requirements, the test methods and the inspection rules. Surgical gowns and drapes made from nonwoven fabric replaced woven cotton because they do the job better: they are supplied sterile and disposed of after one use, so there is no laundering cycle in which sterility can be lost, and they shed far fewer particles than cotton, which sheds lint into the wound. The requirements they must meet are unusual for a textile. The fabric is a barrier: it must resist penetration by liquid under pressure, and by bacteria carried in that liquid, in the areas where blood contact is likely. It must not shed. It must not build a static charge in an operating theatre. And it must remain comfortable enough to wear for hours, which pulls directly against the barrier requirement, since anything impermeable to liquid is uncomfortable to work in.

This Standard specifies the terms and definitions, product classification, technical requirements, test methods, inspection rules, packaging, marking, storage and transportation of protective nonwoven fabrics for surgical use. This Standard applies to single-layer non-woven fabrics, composite non-woven fabrics, film-coated non-woven fabrics that are used in surgical gowns, clean air suits and surgical drapes.

2 Normative references

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

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

GB/T 3920, Textiles - Tests for colour fastness - Colour fastness to rubbing

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, Hygienic standard for disposable sanitary products

GB 18401-2010, National general safety technical code for textile products

GB/T 24120, Textiles - Determination of resistance to water/alcohol solution

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 24218.10, Textiles - Test methods for nonwovens - Part 10: Lint and other particles generation in the dry state

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

3 Terms and definitions

The following terms and definitions are applicable to this document.

3.1 Standard performance surgical gowns (drapes) Surgical gowns (drapes) that meets the minimum performance requirements during traumatic surgery.

3.2 High performance surgical gowns (drapes) Surgical gowns (drapes) that meet the stricter performance requirements during traumatic surgery.

Note: During surgery, those who are expected to be over-exposed to fluids, mechanical stress, or longer surgical operation should use high performance surgical gowns (drapes).

6.4 The determination of cleanliness (particulate matter) shall be carried out in accordance with GB/T 24218.10; the calculation shall be carried out in accordance with A.3 of YY/T 0506.2-2016.

6.5 The determination of lint shall be carried out in accordance with GB/T 24218.10.

6.6 The determination of hydrostatic pressure shall be carried out in accordance with GB/T 24218.16; the rate of rise of water pressure shall be (10 ± 0.5) cmH₂O/min.

6.7 The determination of bursting strength shall be carried out in accordance with GB/T

7742.1.

6.8 The determination of breaking force shall be carried out in accordance with GB/T 24218.3.

6.9 The determination of resistance to alcohol penetration shall be carried out in accordance with GB/T 24120.

6.10 The determination of water-vapor transmission shall be carried out in accordance with the condition

a) in Chapter 7 of GB/T 12704.1-2009.

6.11 The determination of color fastness to rubbing shall be carried out in accordance with GB/T 3920.

6.12 The determination of odor shall be carried out in accordance with