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

GB/T 46755-2025

General technical requirements for intelligent textile products

智能纺织产品通用技术要求

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1 Scope

GB/T 46755-2025 is the Chinese national standard covering textiles with electronics in them - the sensing or heating function and how it is verified, the durability through washing and flexing that ordinary electronics never face, the safety of the battery against the skin, and the labelling. First edition, under the China National Textile and Apparel Council. Issued on 2 December 2025, it has been in force since 1 July 2026.

This document defines the terms and definitions for intelligent textile products, specifies requirements, inspection rules, product use instructions and packaging, and describes the corresponding test methods. This document applies to the evaluation of the general properties of the textile parts of various intelligent textile products, including physical and chemical properties, chemical safety, power safety, thermal safety, mechanical safety, electrical safety, electromagnetic compatibility, electromagnetic radiation, and durability.

2 Normative references

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

GB/T 3922 Textiles - Tests for colour fastness - Colour fastness to perspiration

GB/T 4706.8-2024 Safety of household and similar electrical appliances - Part 8. Particular requirements for blankets, pads, clothing and similar flexible heating appliances

GB 4943.1 Audio/video, information and communication technology equipment - Part

3 Terms and definitions

For the purpose of this document, the terms and definitions defined in GB/T 46729 and the following apply.

3.1 detachable parts Parts that can be removed or opened without the aid of tools.

3.2 information, communication technology textile products Textile products with functions such as processing, transmitting, and storing information.

4 Requirements

4.1 Physical and chemical properties of textiles For the textile part of the product, the basic safety performance shall comply with the requirements of GB 18401 or GB 31701, and other physical and chemical properties shall comply with the provisions of relevant national or industry standards for textile products.

4.2 Chemical safety

4.2.1 Restricted substances requirements for electronic and electrical components For products containing electronic and electrical components, the content of restricted substances in each homogeneous material constituting the electronic and electrical components shall comply with the requirements in Table 1. Table 1 -- Restricted substances requirements for electronic and electrical components

4.2.2 Nickel emission requirements For components containing metallic materials that come into direct contact with human skin, the nickel emission shall not exceed $0.5 \mu\text{g}/(\text{cm}^2 \cdot \text{week})$.

4.3 Power safety Built-in non-detachable batteries in products shall meet the following requirements.

- a) Lithium-ion batteries and battery packs shall comply with GB31241;
- b) Nickel-metal hydride or nickel-cadmium batteries and battery packs shall comply with GB/T 28164;
- c) Non-rechargeable carbon-zinc batteries, alkaline batteries, or button batteries, etc., shall not exhibit fire, leakage, explosion, or any situation affecting safe use during other performance tests.

4.4 Thermal safety

4.4.1 Electrically heated textile products shall comply with the requirements of GB/T 4706.8-2024. Wearable electrically heated textile products shall also comply with the requirements of Annex CC of GB/T 4706.8-2024. Temperature controllers for electrically

heated textile products shall have distinct gear positions or temperature rise/fall indicators, and shall be able to switch on and off normally, changing heating gears. NOTE. Wearable electrically heated textile products include electrically heated clothing, electrically heated scarves, electrically heated gloves, electrically heated waist supports, electrically heated socks, etc.

4.4.2 For other intelligent textile products, during normal use, the maximum surface temperature of the part directly in contact with the skin shall not exceed 43 °C, and the maximum surface temperature of other parts shall not exceed 46 °C.

4.5 Mechanical safety

4.5.1 Accessories on the product shall be smooth, free of burrs, and shall not have accessible sharp points or edges.

4.5.2 Built-in components in the product shall be securely fixed and shall not be scratched by hard objects such as zippers, nor shall they be entangled in buttons or similar protrusions.