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

GB/T 21200-2024

Replacing GB/T 21200-2007

Toner used in dry dual-component developer for laser printers

激光打印机干式双组分显影剂用墨粉

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting is required. This document replaces GB/T 21200-2007 "Toners for dry two-component developers for laser printers" and is compatible with GB/T 21200- Compared with.2007, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

a) The relevant contents of "Scope" have been changed (see Chapter 1, Chapter 1 of the.2007 edition);

b) The relevant contents of terms and definitions have been changed (see Chapter 3, Chapter 3 of the.2007 edition);

c) The requirements and test methods for "working environment conditions" and "packaging and transportation resistance and transportation and storage performance" were changed and merged into "environmental conditions". Environmental adaptability" (see

4.13 and 5.17, 4.1, 4.2, 4.12,

5.11 of the.2007 edition);

d) The technical requirements and test methods for "coarse particles" have been modified (see

5.3 of the.2007 edition);

e) The technical requirements and test methods for "particle size distribution" have been modified (see

5.4 of the.2007 edition);

f) Added technical requirements and test methods for "water content" (see

g) The technical requirements and test methods for "melt index or softening point" have been changed (see

5.6 of the.2007 edition);

1 Scope

China's national standard for the toner component of a dry two-component developer for monochrome laser printers. It specifies the technical requirements, the inspection rules and the marking, packaging, transport and storage, and describes the corresponding test methods, applying to the manufacture of toner for dry two-component developers. This standard covers half of a system, and that is why it is separate from GB/T 21199. In a two-component developer the toner is mixed with a magnetic carrier - iron or ferrite beads with a resin coating - which does two jobs the toner cannot do for itself: it charges the toner triboelectrically by contact, and it transports it to the development zone magnetically. The carrier stays in the machine and is replaced rarely; the toner is consumed and refilled continuously. That division is what makes the two-component system the choice for high-speed and high-volume machines, since the charging is more stable and more uniform than a single-component system can achieve, and image quality holds up over long runs. It also means the toner cannot be specified on its own terms alone. Its triboelectric charge is not a property of the toner but of the toner-carrier pair, so the standard has to fix the reference carrier and the mixing conditions under which charge is measured, or no two results would be comparable. Around that sit the particle size distribution and the fines, the flowability, the fusing and blocking behaviour, the magnetic and electrical properties, the residual moisture, and the appearance and printing performance requirements. Issued on 28 November 2024 and in force since 1 June 2025, it replaces GB/T 21200-2007.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 2828.1 Sampling procedures for inspection by attributes Part

GB/T 13963 Terminology of copying (including multi-function) equipment

GB/T 22372 Monochrome laser printer test version GB/T 24988 Copy paper

GB/T 26572 Limit requirements for restricted substances in electronic and electrical products

GB/T 28033 Comprehensive evaluation method for print quality of monochrome laser printers

GB/T 33871 Determination of total volatile organic compounds (TVOC), benzene and

styrene in toner - Thermal desorption - gas chromatography

GB/T 33874 Toner manufacturing process and product environmental protection requirements

GB/T 39560 (all parts) Determination of certain substances in electrical and electronic products

JB/T 8262.1 Electrostatic copying dry toner Part

3 Terms and definitions

The terms and definitions defined in GB/T 13963 apply to this document.

4 Particle size distribution test method

JB/T 8392 Test method for melt index of dry toner for electrostatic printing

JB/T 9444 Basic environmental test methods for copying machines

JB/T 12629 Test method for the agglomeration of dry toner for electrostatic copying

JB/T 12630 Test method for softening point of dry toner for electrostatic copying

JJF 1070 Rules for the measurement and inspection of the net content of quantitatively packaged goods ISO /

IEC 19752 Information technology office equipment - Toner cartridges for monochrome electrostatic printers and multifunction devices containing printing components Information technology-Office equipment-Method for the determination of toner cartridge yield for monochromatic electrophotographic printers and multi function devices that contain printer components)