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

GB/T 18758-2025

Replacing GB/T 18758-2002

**General technical specification for particle track
anti-counterfeiting products**

粒子径迹防伪技术产品通用技术条件

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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. This document replaces GB/T 18758-2002 "General Technical Requirements for Anti-Counterfeiting Nuclear Technology Products" and GB/T 20205-2006 "Heavy Ion Micro- This document is based on GB/T 18758-2002 and incorporates some of the content of GB/T 20205-2006. Compared with GB/T 18758-2002, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- a) The scope of application has been changed (see Chapter 1, Chapter 1 of GB/T 18758-2002);
- b) "Classification" has been changed (see Chapter 4, Chapter 4 of GB/T 18758-2002);
- c) Deleted "anti-counterfeiting strength" (see Chapter 5 of GB/T 18758-2002);
- d) Added "anti-counterfeiting requirements" (see 5.1.1);
- e) The "Appearance Requirements" have been changed (see 5.1.2, 6.2 of GB/T 18758-2002);
- f) The "Physical Properties" has been changed (see Table 2, Table 1 of GB/T 18758-2002);
- g) Added "anti-counterfeiting performance" (see 5.3);
- h) The "Test methods" have been changed (see Chapter 6, Chapter 7 of GB/T 18758-2002);
- i) The "Inspection Rules" have been changed (see Chapter 7, Chapter 8 of GB/T 18758-2002);

j) "Safety Management Measures" has been deleted (see Chapter 9 of GB/T 18758-2002);

k) "Identification, packaging, transportation and storage" (see Chapter 10 of GB/T 18758-2002) has been deleted. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document is proposed and coordinated by the National Anti-Counterfeiting Standardization Technical Committee (SAC/TC218). This document was drafted by: Zhongke Microworld (Beijing) Technology Development Co., Ltd., Changchun University of Science and Technology, Zhongshan Jilian Optoelectronics Technology Co., Ltd., Zhongneng Hydrogen Core (Beijing) Ion Beam Technology Co., Ltd., Guizhou Renhuai Shenren Packaging Printing Co., Ltd., Zhongshan Guoan Torch Technology Development Co., Ltd. Development Co., Ltd., Shandong Taibao Information Technology Group Co., Ltd., Jinda Zhongfang Technology Co., Ltd., China Home Furnishing Institute (Beijing) Testing and Certification Co., Ltd. company. The main drafters of this document are. Diao Keming, Fu Xiuhua, Wang Ben, Jiang Tao, Chen Xirong, Wu Jingjun, Zhao Jinbao, Li Shuai, Liu Bin, Sui Yi, Ning Peng, Gou Huachong, Wang Yongsheng, Fan Hongyu, Hu Juan, Cheng Xiangfeng, Mu Jie, and Gou Honggang. The previous versions of this document and the documents it replaces are as follows:

1 Scope

GB/T 18758-2025 is the Chinese national standard on general technical specification for particle track anti-counterfeiting products, in the field of environment and health protection, safety. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 1 August 2025 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 February 2026. Classification: ICS 13.310, CCS A90. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the general requirements, appearance requirements, anti-counterfeiting performance, identification performance and other technical requirements of particle track anti-counterfeiting technology products. The requirements and inspection rules are given, and the corresponding test methods are described. This document is applicable to the design, production and inspection of various types of particle track anti-counterfeiting technology products.

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

3 Terms and Definitions

The terms and definitions defined in GB/T 17004 and the following apply to this document.

3.1 particle trackparticletrack In a solid medium, the path followed by a particle or the trace it leaves behind.

3.2 nuclear track Traces produced by charged particles in solid media.

3.3 Traces produced by bombarding solid media with a heavy ion accelerator.

3.4 ion beam track ionbeamtrack The traces produced by the same beam of ions moving in the same direction at a certain speed.

3.5 Colored The colored liquid remains in the micropore channel, the pore wall is dyed, and the color is left in the micropore pattern area.

3.6 Transparent coloring The phenomenon of colored liquid passing through microporous channels and being printed on the substrate.