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

GB/T 17001.7-2023

**Anti-counterfeiting printing ink - Part 7: Optical variable
anti-counterfeiting printing ink**

防伪油墨 第7部分：光学可变防伪油墨

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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 is Part 7 of GB/T 17001 "Security Inks": GB/T 17001 has published the following parts:

- Part 1: Ultraviolet excited fluorescent anti-counterfeiting ink;
- Part 2: Magnetic anti-counterfeiting ink (GB/T 18751-2002);
- Part 3: Heat-sensitive color-changing anti-counterfeiting ink (GB/T 18752-2002);
- Part 4: Sunlight-induced color-changing anti-counterfeiting ink (GB/T 18753-2002);
- Part 6: Infrared excitation fluorescent anti-counterfeiting ink;
- Part 7: Optically variable security inks: Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents: This document is proposed and managed by the National Anti-counterfeiting Standardization Technical Committee (SAC/TC218): This document was drafted by: Beijing Jinchen Siveco Security Printing Co., Ltd., China Security Anti-counterfeiting Certificate Development Center, National Anti-counterfeiting Products Quality Supervision and Inspection Center, Wuxi Xinguang Printing Anti-counterfeiting Technology Co., Ltd., Shandong Taibao Information Technology Group Co., Ltd., Xi'an Xizheng Printing Co., Ltd: Co., Ltd., Beijing Wanyang Anti-counterfeiting Technology Co., Ltd., Beijing Tomorrow Zhiguang Technology Co., Ltd., Beijing Boda Green High-Tech Co., Ltd., Shandong Luxin Siyuan Anti-counterfeiting Technology Co., Ltd., Guangdong Qiaosheng New Material Technology Co., Ltd., X-Rite (Shanghai) Color Technology Co., Ltd., China National Institute of Electrical Appliances: The main drafters of this document: Wang Yongjie, Wang Qiuju, Huang Tiexiang, Zhou Tengfei, Luo Tong, Mou Xiaohui, Tang Weichong, Yang Na, Wang Guoping, Fan Guanbao, Yao Ruigang, Xu Dachuang, Yu Chi, Luo Jun, Long Liang, Wang Ying, Zhao Lirong, Qi Xin, Zhao Ying, Zhang Bo:

As a base material of anti-counterfeiting products, anti-counterfeiting ink is widely used in

national securities, certificates, ordinary printed matter and commodity packaging; and other fields, with a wide range of applications: The formulation of this series of national standards can further regulate the production, use and testing of anti-counterfeiting inks, and is of great help to the maintenance of national standards: Door security, social and financial security, product supervision and management, and product quality improvement are of great significance: This series of standards is mainly based on anti-counterfeiting oil Classification of ink production process and anti-counterfeiting features: GB/T 17001 "Security Ink" is expected to consist of 9 parts:

- Part 1: UV-excited fluorescent anti-counterfeiting ink: The purpose is to give the requirements and test methods for UV-excited fluorescent anti-counterfeiting inks:
- Part 2: Magnetic anti-counterfeiting ink (included in GB/T 18751-2002): The purpose is to give the requirements and requirements of magnetic anti-counterfeiting ink experiment method:
- Part 3: Thermochromic anti-counterfeiting ink (included in GB/T 18752-2002): The purpose is to provide heat-sensitive color-changing anti-counterfeiting ink requirements and test methods:
- Part 4: Sunlight-induced color-changing anti-counterfeiting inks (included in GB/T 18753-2002): The purpose is to give sunlight stimulated color change Requirements and test methods for anti-counterfeiting inks:
- Part 5: Pressure-sensitive security inks: The purpose is to give the requirements and test methods for pressure-sensitive anti-counterfeiting inks:
- Part 6: Infrared excitation fluorescent anti-counterfeiting ink: The purpose is to give the requirements and test methods of infrared excited fluorescent anti-counterfeiting ink:

1 Scope

GB/T 17001.7-2023 is the Chinese national standard on anti-counterfeiting printing ink - part 7:optical variable anti-counterfeiting printing ink, 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 23 May 2023 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 December 2023. 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 classification, requirements, test methods, inspection rules,

signs, packaging, transportation, Storage and environmental protection, hygiene requirements: This document applies to interference-type optically variable anti-counterfeiting inks used in anti-counterfeiting graphics and texts in printed matter:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to this document:

GB/T 250-2008 Gray sample card for color fastness test of textiles to assess discoloration

GB/T 730-2008 Textile color fastness test Blue wool standard sample (1~7) grade quality control

GB/T 3186 Paints, varnishes and sampling of raw materials for paints and varnishes GB/T 13217:

1 Ink color and tinting strength test method GB/T 13217:

3 Ink fineness inspection method GB/T 13217:

4 Ink Viscosity Test Method GB/T 13217:

3 Terms and Definitions

The following terms and definitions apply to this document: 3:

1 Through optical principles, inks made of specific materials that make prints appear in different colors with different viewing angles: 3:

2 Standard sample reference sample Sample The sample used to compare the quality of the optically variable anti-counterfeiting ink (3:1) as confirmed by both the supplier and the buyer: 3:3 test sample testsample sample Samples of optically variable security inks (3:1) to be tested:

7 Test method for adhesion fastness of liquid ink

GB/T 18724 Printing technology Determination of resistance to various reagents of printed matters and printing inks

GB/T 19437-2004 Spectral measurement and colorimetric calculation of printed images in printing technology

GB/T 23649-2009 Optical, geometrical and metrological requirements for reflection densitometers for printing technology process control printing