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

**GB/T 13217.1-2020**

Replacing GB/T 13217.1-2009

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**Test method for colour and tinctorial strength of ink**

油墨颜色和着色力检验方法

**Issued on: November 19, 2020**

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Standardization Administration of China**

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### Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 13217.1-2009 "Liquid ink color inspection method", GB/T 13217.6-2008 "liquid ink coloring Force Inspection Method", GB/T 14624.1-2009 "Offset Printing Ink Color Inspection Method" and GB/T 14624.2-2008 "Offset Printing Ink Coloring Force Test Method." This standard is based on GB/T 13217.1-2009, which integrates GB/T 13217.6-2008, GB/T 14624.1- Part of.2009, GB/T 14624.2-2008, compared with GB/T 13217.1-2009, main technical changes except for editorial changes as follows:

---The standard name was revised to "Ink Color and Tinting Strength Inspection Method";

---Added the printing method of the color of the printability meter and the color difference test of the color (see

6.1.5 and 6.1.6);

---Added appendix "Schematic diagram of printing principle of ink printing suitability meter" (see Appendix A);

--- Added appendix "Schematic diagram of printing principle of ink gravure proofing instrument" (see appendix B);

--- Added appendix "Schematic diagram of printing principle of ink frame coater" (see appendix C);

--- Added the appendix "Methods of Assessing Color Differences" (see Appendix D). This standard was proposed by the China National Light Industry Council. This standard is under the jurisdiction of the National Ink Standardization Technical Committee (SAC/TC127).

Drafting organizations of this standard. Hanghua Ink Co., Ltd., New Oriental Ink Co., Ltd., Bauhinia Ink (Zhongshan) Co., Ltd., Zhejiang Yongzai Ink Co., Ltd., Guangdong Tianlong Ink Co., Ltd., Shanghai Ink Silian Chemical Co., Ltd., Shanghai Peony Ink Co., Ltd., Beijing Printing College, Zhongshan Bright Environmental Ink Co., Ltd., Nanjing Tianshi New Material Technology Co., Ltd., Hangzhou Huahaitian Technology Co., Ltd., Hangzhou Hivet Chemical Technology Co., Ltd., Zhuhai Huijin Quality Standard Technology Co., Ltd.,

Chengdu Tuozhan New Material Co., Ltd. The main drafters of this standard. Zhang Teng, Liu Guowen, Zhou Zhiqiang, Wu Min, Wang Datian, Wang Qing, Chen Aijun, Wei Xianfu, Zhang Fengnian, Yu Haikuo, Xia Guiling, Xu Huajun, Ji Tuo, Wang Qiang, Fang Jianjian. The previous versions of the standard replaced by this standard are as follows:

---GB/T 13217.1-1991, GB/T 13217.1-2009;

---GB/T 13217.6-1991, GB/T 13217.6-2008;

---GB/T 14624.1-1993, GB/T 14624.1-2009;

---GB/T 14624.2-1993, GB/T 14624.2-2008. Ink color and tinting strength inspection method

## 1 Scope

GB/T 13217.1-2020 is the Chinese national standard on test method for colour and tinctorial strength of ink, in the field of paint and colour industries. 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 19 November 2020 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 June 2021. Classification: ICS 87.080, CCS Y44. 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 standard specifies the inspection method for ink color and tinting strength. This standard applies to ink products.

## 2 Normative references

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

GB/T 250 Gray Scale for Textile Color Fastness Test Evaluation

GB/T 10335.1-2017 Coated paper and cardboard coated fine art printing paper (coated paper)

GB/T 13217.4-2020 Inspection method for ink viscosity

GB/T 18723 Printing technology uses viscometer to measure the viscosity of paste ink and binder

GB/T 19437 Spectral measurement and chromaticity calculation of printed images in printing technology

GB/T 30130-2013 Offset printing paper

GB/T 30329.1 Printing technology. Color and transparency of four-color printing inks. Part

### 3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Toptone The color displayed by the thin layer of ink scratched on the scratch paper. [GB/T 15962-2018, definition 4.23]

3.2 Undertone The color of a scratch-like paper scratched with a thin layer of ink under light perspective.

Note. Rewrite GB/T 15962-2018, definition 4.24.

3.3 Ink masstone The color of the thick layer of ink scratched on the scratch paper. [GB/T 15962-2018, definition 4.25]

### 4 Tools and materials

4.1 Scratch sample paper. meet the requirements of Table 1 of GB/T 30130-2013, that is, 80g/m<sup>2</sup> of superior product. Specification 210mmx70mm, top A black solid cross is printed 130mm down.

Note. The black bar is for checking the hiding power of the ink.