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

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Graphic technology - Colour conformity of printing workflows

印刷技术 印刷工作流程的颜色一致性

(English Translation)

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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 equivalent to ISO 19302:2018 "Color consistency in printing technology printing workflow":

The following editorial changes were made to this document:

--- Change 70% in Table C:2 of Informative Appendix C to 68% to adapt to my country's technical conditions:

Introduction

The printing industry includes different workflows for producing various printed products: For tone reproduction and color reproduction, many ISO standards regulate the target value and tolerance value are determined, which is very necessary for the implementation of color management and standardized workflow:

Even if relevant standards can specify target values and tolerance values, the printing provider must prove that its entire production process complies with these standards:

Capacity often becomes a technical issue as well as a business issue:

The quality of printed color reproduction depends on the operation of the printing workflow:

The printing workflow operation is determined by the color definition (which color is specified), the requirements for color reproduction during the process (what to control) and color consistency (the results of the verification process) are composed:

To this end, it is necessary to provide guidance to print providers, suppliers, customers and independent organizations to enable them to implement and/or evaluate print work:

Process to achieve and demonstrate consistency in printed products:

This document confirms the following:

- a) conditions and test methods for document generation consistency;
- b) Conditions and test methods for consistency of document color separation;
- c) conditions and test methods for the consistency of spot colors and/or composite colors;
- d) Conditions and test methods for soft proofing consistency;
- e) Conditions and test methods for hard proofing consistency;
- f) conditions and test methods for observing conformity of conditions;
- g) Conditions and test methods for process, printing and color consistency evaluation for specified RPCs:

This document applies to all printing applications including CMYK, CMYK spot colors, spot colors only, non-CMYK based processes and multi-color printing:

This document defines the three main production stages of printed products as follows:

- 1) Color Definition: The first stage where the client and design services select the desired brand and visual colors;
- 2) Color reproduction: the production process from receiving the job file to the end of the printing job;
- 3) Color consistency: A necessary stage for consistency evaluation of printing jobs:

This document provides:

---Reference framework for typical standardized printing workflows (CMYK, CMYK spot color, non-CMYK, spot color only and multicolor) describe;

---Applicable to the relevant standards required at each stage in the standardized printing workflow;

--- Description of the expected setup, calibration and process controls required at each stage of the printing workflow, based on appropriate standards;

--- Definition of test conditions for color consistency activities when not explicitly mentioned in the relevant standards:

Printing Technology Color consistency in printing workflow

1 Scope

This document specifies requirements for printing workflow and describes methods for the evaluation of tone and colour reproduction:

This document applies to the definition, evaluation and Review, such as CMYK, CMYK spot color, non-CMYK, spot color only or multi-color printing:

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:

Note: GB/T 12823.4-2008 Photographic density measurement Part 4: Geometric conditions for reflection density (ISO 5-4:1995, IDT) ISO 2469 Paper, board and pulp - Determination of diffuse reflectance factor (Diffuse reflectance factor) Note: GB/T 7973-2003 Paper, paperboard and pulp - Determination of diffuse reflectance factor (diffuse/vertical method) (ISO 2469:1994, NEQ) tions) ISO 12646 Graphic technology - Displays for colour proofing Note: GB/T 41598-2022 Performance indicators of displays for color proofing in printing technology (ISO 12646:2015, IDT) ISO 12647 (all parts) Graphic technology - Process control for halftone separations, proofs and production prints) Note: GB/T 17934 (all parts) Printing technology - Process control of halftone color separations, proofs and production prints [ISO 12647 (all parts)] ISO 13655 Graphic technology - Spectral measurement and colorimetry of printed images Note: GB/T 19437-2004 Printing technology Spectral measurement and colorimetric calculation of printed images (ISO 13655:1996, IDT) proofing systems) Note: GB/T 41466-2022 Printing technology color soft proofing system requirements (ISO 14861:2015, IDT) ISO 15930 (all parts) Graphic technology - Prepress data exchange using PDF Note: GB/T 27935 (all parts) Printing technology Prepress data exchange Use of PDF [ISO 15930 (all parts)] ISO 17972-4 Graphic arts colour data exchange format (CxF/X) Part 4: Spot colour profile data (CxF/X-4) data(CxF/X-4)] ISO 20654 Graphic technology - Measurement and calculation of color tone values