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

GB/T 43828.2-2024

**Graphic technology - Prepress digital data exchange - Colour
targets for input scanner calibration - Part 2: Advanced colour
targets for input scanner calibration**

印刷技术 印前数据交换 输入扫描仪校准用色标 第2部分:输入扫描仪校准用高阶
色标

(English Translation)

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Table of Contents

Preface

Introduction

1 Scope

2 Normative references

3 Terms and Definitions

4 Technical requirements

4.1 General Principles

4.2 Color Code Design

4.3 Color Code Format and Physical Characteristics

4.4 Tolerance of Color Block Values

4.5 Spectral Measurement and Colorimetric Calculation

4.6 Data Report

4.7 Data file format

4.8 Color code life

Appendix A (Informative) Example Format and Physical Characteristics of Higher-Order Transmittance Color Scales Example Format and Physical Characteristics of Higher-Order Transmittance Color Scales

A.1 Type 1, 10.2 cm x 12.7 cm (4 in x 5 in) film

A.2 Type 2, 6 cm x 7 cm film

A.3 Type 3, 35 mm film

A.4 Grayscale and RGB/CMYscale values

Appendix B (Informative) Example format and physical characteristics of high-order reflectance color scales

B.1 Type 1, 12.7 cm x 17.8 cm (5 in x 7 in)

B.2 Type 2, 10 cm x 15 cm

B.3 Type 3, 15 cm x 22 cm

B.4 Color Gamut Limitation

B.5 Grayscale and RGB/CMYscale values

Appendix C (Informative) CxF/X file format Data file format Data file format

C.1 Overview of CxF/X files for data exchange according to ISO 12642 (all parts)

C.2 Requirements for CxF/X files for ISO 12642 (all parts) data exchange

C.3 Optional value ranges for non-CMYK color scales and transmission color scales

C.4 Layout Instructions

References

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 is part 2 of GB/T 43828 "Printing technology - Color standards for prepress data exchange and input scanner calibration".

GB/T 43828 has published the following parts.

Part 1: Input color patches for scanner calibration;-Part 2: Input high-level color scale for scanner calibration. -this document is equivalent to ISO 12641-2:2019 "Printing technology Prepress data exchange Input scanner calibration color scale Part 2 "Enter high-level color scale for scanner calibration".

Introduction

Color standard design and data are the digital benchmarks for the calibration and characterization of image capture devices in various printing and scene presentations, and are of great significance to the digitalization and Intelligent construction plays a very important role. Using ISO 12641 color standard data set and its mapping algorithm can improve the color Improve the technical level of color benchmark establishment and color management, fill the color benchmark gap in the printing industry chain, optimize color management methods, and provide a reference for my country's printing industry.

It provides supplement for the construction of technical standard system.

ISO 12641 covers the layout and use of color scales for calibrating photographic product/scanner combinations in the preparation of publications and print.

Colorimetric values define the color scale of additive color transparency and subtractive color paper, which can be used to evaluate the color and color image digitization acquisition.

The color reproduction quality of the collection and reproduction is also used as a reference parameter for the system calibration of digital photography, color display and printing reproduction, solving the entire printing the digitization of printing, especially the benchmark data problem in color image standardization, has greatly improved the efficiency of printing manuscript production and evaluation.

Increase efficiency, reduce operating costs, and reduce duplication and redundancy of operations.

In order to maintain consistency and compatibility with existing color standards, ISO 12641 consists of two parts. Part 1 specifies the input scanner calibration Approved color scale, Part 2 specifies the requirements for high-level color scales.

GB/T 43828 "Printing technology prepress data exchange input scanner calibration color standard" is equivalent to ISO 12641.

It consists of two parts.

Part 1: Color scale for input scanner calibration. The purpose is to use additive color transparencies and subtractive color transparencies in publishing and printing.

Color scales for color paper and use the layout and colorimetric values of the calibrated photography product/scanner combination scales as a reference for digital photography.

System calibration reference parameters for photography, color display and print reproduction.

Part 2: High-order color scale for input scanner calibration. The purpose is to calibrate image capture devices used in publishing and printing processes.

Advanced reflectance and transmission color scales, scale layouts, and colorimetric value frameworks for characterizing and characterizing color in digital imaging and printed originals Research, testing and evaluation, and system calibration reference parameters for digital photography, color display and print reproduction.

Printing Technology Prepress Data Exchange Enter the color patch for scanner calibration
Part 2: Inputting high-level color standards for scanner calibration

1 Scope

This document specifies the format of high-order reflectance and transmission color scales, as well as the frame of chromaticity values, for use in the calibration and characterization of image acquisition equipment.

Rack requirements.

This document applies to the color scale creation and data reporting of GB/T 43828.1 defined and user-defined reflectance color scales and transmission color scales.

This document does not apply to self-luminous color scales.

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.

in this document.

ISO 12637-1 Graphic technology - Vocabulary - Part 1: Basic terms Fundamental terms
 ISO 13655:2017 Graphic technology - Spectral measurement and colorimetry of printed images urement and colorimetric computation for graphic arts images) Note. GB/T 19437-2004 Printing technology Spectral measurement and colorimetric calculation of printed images (ISO 13655:1996, IDT) ISO 17972-2 Printing technology Color data exchange format (CxF/X) Part 2: Scanner object data (CxF/X-2) [Graphic technology-Colour data exchange format (CxF/X)-Part 2: Scanner target data (CxF/X-2)] ISO 17972-3 Printing technology Color data exchange format (CxF/X) Part 3: Output object data (CxF/X-3) [Graphic technology-Colour data exchange format (CxF/X)-Part 3: Output target data (CxF/X-3)] ISO 28178 Graphic technology - Interchange format for color and process control data using XML or ASCII text logy-Exchange format for color and process control data using XML or ASCII text)

3 Terms and definitions

For this document, the terms and definitions defined in ISO 12637-1 and the following apply.

CIE tristimulus value in the tristimulus color system specified by CIE, the number of three reference color stimuli required to match a specific color stimulus.

Note: In the 1931 CIE standard colorimetry system, the tristimulus values are represented by the symbols X, Y, and Z.

CIELAB colour space

In a rectangular coordinate system, an approximately uniform three-dimensional color space is formed by plotting L^* , a^* , and b^* .

NOTE See ISO 13655:2017 for a description of how to calculate CIELAB.

Color gamut