



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

GB/T 17934.7-2021

**Graphic technology - Process control for the production of
half-tone colour separations, proof and production prints - Part
7: Proofing processes working directly from digital data**

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Foreword

GB/T 17934 "Printing Technology, Screen Color Separation, Proofs and Process Control of Production Printed Matter" is divided into 8 parts.

---Part 1.Parameters and measurement methods;

---Part 2.Lithographic offset printing;

---Part 3.Newsprint cold-set offset printing;

---Part 4.Publishing gravure;

---Part 5.Screen printing;

---Part 6.Flexographic printing;

---Part 7.Proofing process using digital data directly;

---Part 8.Direct use of digital data to verify the production process of printed matter.

This part is Part 7 of GB/T 17934.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

The use of the translation method in this section is equivalent to the adoption of ISO 12647-7:2016 "Printing Technology Screen Adjustment of Color Separation Plates, Proofs and Production Printed Matters"

Process control. Part 7.Proofing process using digital data directly.

The Chinese documents that have a consistent correspondence with the international documents cited in this section are as follows.

---GB/T 8941-2013 Determination of the specular gloss of paper and cardboard (ISO 8254-1:2009, ISO 8254-3:2004,

MOD)

---GB/T 10739-2002 Standard atmospheric conditions for handling and testing of paper, paperboard and pulp samples (eqvISO 187.1990)

---GB/T 18721-2002 Printing technology prepress data exchange CMYK standard color image data (CMYK/SCID)

(idtISO 12640-1.1997)

---GB/T 22113-2008 printing technology prepress data exchange label image file format for image technology (TIFF/

IT) (ISO 12639.2004, ITD)

---GB/T 22771-2008 Filtered xenon arc lamp for printing technology printed matter and printing ink to evaluate light resistance (ISO 12040.

1997, MOD)

This section has made the following editorial changes.

---Added a note under 3.3;

---ISO 12642 was changed to ISO 12642-2 in A.1.1;

---GB/T 9851.2-2008, ISO 105-B02, ISO 2470-2, ISO 12647-2 and ISO 12647-7.2013.

Introduction

ISO 12647-1 provides definitions, general rules, general procedures, material requirements, and material requirements covered in ISO 12647-2~ISO 12647-8

Data definition, measurement conditions and report type.

This part deals with digital proofing, and puts forward requirements for the most stringent proofing part in the printing and publishing market.

This part mainly specifies the target value (or target value group) and tolerance of the basic parameters specified in ISO 12647-1, which are specifically used for data

Word proofing. The basic parameters that define printing conditions include screening parameters (applicable), solid color, printing substrate color, intermediate leveling screen

Color and tone curve. This part also specifies the test methods for the characteristics of digital proofing printed matter and its substrate. These characteristics and stability

Certainty is related to the state of reliability, and therefore to the certification process.

The printing industry widely uses proofing to predict the output performance of digital files, and proofing is printed through a variety of non-printing processes.

And applications to produce high-resolution, high-quality proofs. A characterization data set that defines specific printing conditions provides a basis for prediction.

Usually, specific printing conditions are defined by the color profile of the International Color Consortium (ICC) or related feature data sets.

Both are related to the source data and the printing color defined by the chromaticity. Business organizations or individuals can obtain these data, which are derived from

The printing conditions of the relevant process standards in the ISO 12647 series.

The purpose of proofing printed matter is to simulate as much as possible the visual characteristics of the finished printed product. In order to visually match a specific seal

Brushing conditions, the proofing process needs to define a set of parameters, which are not necessarily the same as the values proposed in ISO 12647-1 or other parts of ISO 12647.

with. This is caused by differences in the colorant spectrum or characteristics such as gloss, light scattering (in the printed substrate or colorant), transparency, etc.

of. In these cases, the spectrophotometric method is better than the density method.

Another problem is the matching between low-weight double-sided printed products and digital proofs made with almost opaque substrates.

Substrates are often used for thermosetting rotary and publishing gravure printing. If the color management features measured on the white backing are used when generating the proofs

Sexual documents, and the printed product is measured on the black backing, which inevitably causes the visual and measurement differences between the two. Because according to

According to the relevant part of ISO 12647, non-opaque printed products printed on both sides must be measured on a black backing. For all interested parties, it is necessary

Fully communicate these possible differences beforehand.

For a long time, neither the characterization data nor the existing criteria and restrictions on satisfactory matching have been consistent, which has led to people

When evaluating the proofing system, a lot of unnecessary effort is spent to understand different but similar applications, and inconsistent results are obtained, so that

The industry is burdened with cost and time. Therefore, ISO 12647 aims to provide the field with standards and related test procedures.

guide.

Appendix A summarizes the requirements for the digital proofing printed matter listed in the main body of this part. In three typical cases, they can be based on their

Relevance trade-off selection.

---Proofing printed matter requirements. This is a proof sheet made for a specific printing condition. If you want to become a printer and

The contract between digital data providers must meet the requirements (certified sample creation).

---Proofing system requirements. This refers to a proofing system including hardware and software from a supplier.

Specific printing conditions must meet the requirements (certified proofing system) to reliably produce digital composite sheets.

---Proofing printed matter production requirements. This means that proofing under certain printing conditions must be in accordance with the use of only one control wedge on site.

Type testing requirements (certified on-site samples).

Printing technology mesh color separation plates, proofs and

Process control for the production of printed matter

Part 7. Proofing process using digital data directly

1 Scope

This part of GB/T 17934 specifies the requirements for the system for the production of hard copy digital proofing printed matter. The proofing printed matter is used for simulation.

The printing conditions defined by a set of characterization data, this section also recommends appropriate test methods related to these requirements.

2 Normative references

The following documents are indispensable for the application of this section. For dated reference documents, only the dated version applies to this article

Pieces. For undated reference documents, the latest version (including all amendments) is applicable to this document.

ISO 187 Standard atmospheric conditions for the treatment and testing of paper, paperboard and pulp samples (Paper, board and pulps-Standard

atmosphere for conditioning and testing and procedure for monitoring the atmosphere and conditioning