



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

GB/T 17934.2-2021

**Graphic technology - Process control for the production of
half-tone colour separations, proof and production prints - Part
2: Offset lithographic processes**

Issued on: May 21, 2021

Implemented on: December 1, 2021

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

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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 2 of GB/T 17934.

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

This part replaces GB/T 17934.2-1999 "Printing technology, mesh color separation film, proofs and process control of printed products

Part 2.Offset Printing, compared with GB/T 17934.2-1999, except for editorial changes, the main technical changes are as follows.

a) The applicable "scope" is changed, and the "separation-based proofing and printing process" in the scope of GB/T 17934.2-1999 is deleted.

"Process", changed to "directly applicable to printing press samples and printing production processes using color separation plates" (see Chapter 1);

b) Some items in the "Terms and Definitions" have been changed, and the "offset printing plates, positive offset printing plates" in GB/T 17934.2-1999 have been deleted

Materials, negative offset printing plates, four-color continuous form printing,

commercial/special printing, non-periodic mesh adjustment and screening" and other terms and definitions

Terms and definitions such as "coverage", "calibration", "characterized data" and "tone value" have been added (see Chapter 3);

c) Delete the corresponding content about "color separation film" in GB/T 17934.2-1999, and change the "color separation film, printed matter" in the original standard

Change to "overview, data files and printing plates, proofs or production prints" and other content (see 4.2, 4.3);

d) The calculation of density, CIELAB color coordinates and CIELAB color difference has been added, and the use of measurement and control strips has been defined (see Chapter 5);

e) Deleted Appendix A of GB/T 17934.2-1999 "Methods for determining the ink chromaticity parameters on the paper type given in Table 2

Method", Appendix B "Ink color data measured under non-standard conditions" and Appendix C "The relationship between the increase of print gradation and the number of screen lines

"System", appended Appendix A "Gray Reproduction and Gray Balance" and Appendix B "Handling of Paper Color Difference" (see Appendix A and Appendix B).

The use of the translation method in this part is equivalent to the adoption of ISO 12647-2:2013 "Printing Technology Screen Adjustment of Color Separation Plates, Sample Sheets, and Additional Printing

Process Control Part 2. Lithographic Offset Printing.

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, MOD);

---GB/T 17934.1-2021 Printing technology, mesh color separation plate, sample sheet and process control of production printed matter No. 1

Part. Parameters and measurement methods (ISO 12647-1:2013, IDT);

---GB/T 17934.7-2021 Printing technology, mesh color separation plate, sample sheet and process control of printed matter No. 7

Part. Proofing process using digital data directly (ISO 12647-7:2016, IDT);

---GB/T 22880-2008 CIE whiteness determination of paper and paperboard, D65/10° (outdoor sunlight) (ISO 11475:2004,

MOD);

---GB/T 30329.1-2013 Printing Technology Four-color Printing Ink Color and Transparency Part 1. Sheet Paper and Thermoset

Web offset printing (ISO 2846-1.2006, MOD);

---CY/T 128-2015 Printing technology matching color characterization data set printing system adjustment method (ISO /T S10128.

2009, IDT).

This section has made the following editorial changes.

---Correct the standard drafting specification errors, and add ISO 2470-2 and ISO 3664 to the reference documents;

--- Correct the order of references.

1 Scope

This part of GB/T 17934 specifies a series of process parameters and parameter values, which are used for four types of offset printing other than newsprint cold-set offset printing.

Color separation, plate making and printing production process of color sheet-fed offset printing and web offset printing.

The selection of process parameters and parameter values takes into account the typical production process, which uses all the substrates that can be bought on the market.

The stage of printing production includes "color separation", "proofing", "plate making", "first sample" and "printing production".

This section.

---It is directly applicable to printing press samples and printing production processes using color separation plates;

---Suitable for printing press samples and printing production processes with four-color printing or more, provided that the same number as four-color printing is used

According to data, screening, printing substrates and printing parameters;

---Suitable for printing on packaging cardboard materials;

---Suitable for various drying methods, such as thermosetting, infrared and ultraviolet drying;

---Provide reference for quality assurance and quality management.

This part does not apply to printing production other than offset printing, such as direct

printing through digital data, without intermediate image carrier, or image

The carrier can be updated with each print, so that each print has a different content for printing.

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

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

ISO 2846-1 Printing technology. Color and transparency of four-color printing inks. Part 1. Sheet-fed and thermosetting web offset printing

(Graphic technology - Colour and transparency of printing ink sets for four-colour printing - Part 1. Sheet-fed and heat-set web offset lithographic printing)

ISO 8254-1 Paper and paperboard specular gloss determination Part 1. 75° with condensed beam, TAPPI method (Paper and

board - Measurement of specular gloss - Part 1. 75 degree gloss with a converging beam, TAPPI method)

ISO 8254-2 Paper and cardboard specular gloss determination Part 2. 75° with parallel beam, DIN method (ASTM

D7163 replacement) (Paper and board - Measurement of specular gloss - Part 2. 75 degree gloss with a par-

allel beam, DIN method (alternative to ASTM D7163)]

ISO / T S10128 printing technology matching color characterization data set printing system adjustment method (Graphic technology -

Methods of adjustment of the colour reproduction of a printing system to match a set of characterization data)

ISO 11475 CIE whiteness determination of paper and paperboard, D65/10° (outdoor daylight) (Paper and board - Determination of

CIE whiteness, D65/10 degrees (outdoor daylight)]

ISO 12647-1 Printing Technology, Screen Adjustment, Process Control of Separation Plates, Proofs and Printed Products Part 1. Parameters and

Measurement method