
**Graphic technology — Process
control for the production of half-
tone colour separations, proofs and
production prints —**

**Part 3:
Coldset offset lithography on newsprint**

*Technologie graphique — Contrôle du processus de confection de
sélections couleurs tramées, d'épreuves et de tirages —*

Partie 3: Impression offset sans sécheur sur papier journal



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 130, *Graphic technology*.

This third edition cancels and replaces the second edition (ISO 12467-3:2005), which has been revised due to demands from customer experience. The revision introduces grey reproduction and grey balance calculation, a printing condition for standard newsprint, normative ΔE^* tolerances for primary and secondary colours, one general tone value increase curve, a change in the colouration of magenta, options to monitor the printing characteristics and a general clean up.

ISO 12647 consists of the following parts, under the general title *Graphic technology — Process control for the production of half-tone colour separations, proof and production prints*:

- *Part 1: Parameters and measurement methods*
- *Part 2: Offset lithographic processes*
- *Part 3: Coldset offset lithography on newsprint*
- *Part 4: Publication gravure printing*
- *Part 5: Screen printing*
- *Part 6: Flexographic printing*
- *Part 7: Proofing processes working directly from digital data*
- *Part 8: Validation print processes working directly from digital data*

Introduction

When producing a half-tone colour reproduction it is important that the colour separator and printer have previously specified a minimum set of parameters that uniquely define the visual characteristics and other technical properties of the planned print product. Such an agreement enables the correct production of suitable separations (without recourse to “trial-and-error”).

For more information on the technical background refer to ISO 12647-1.

It is the purpose of this part of ISO 12647 to list and explain the minimum set of process parameters required to uniquely define the visual characteristics and related technical properties of a half-tone production print produced by coldset offset lithography on newsprint from a set of half-tone separation data.

It is a further purpose of this part of ISO 12647 to list values or sets of values of the primary parameters specified in ISO 12647-1 and related technical properties of a half-tone newspaper print produced from a set of half-tone colour separation data. When deemed useful, secondary parameters are also recommended for specification.

Provisions for flexographic printing can be found in informative [Annex D](#).

Graphic technology — Process control for the production of half-tone colour separations, proofs and production prints —

Part 3:

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1 Scope

This part of ISO 12647 specifies a number of process parameters and their values to be applied when producing colour separations and printing forms for newspaper single or four-colour printing. The parameters and values are chosen in consideration of the process, covering the process stages: “colour separation”, “making of the printing formed”, “OK print or proof” and “production printing”.

This part of ISO 12647 is intended to enhance communication between printers, publishers and advertisers and to make print buyers aware of the expected printed result in advance, enabling them to plan accordingly. This part of ISO 12647 defines tolerances, allowing for objective quality evaluations and raising the competitiveness of newspapers compared to other media.

This part of ISO 12647 is applicable:

- to coldset offset production printing on newsprint that use colour separation data;
- by analogy to press printing from printing surfaces produced by direct imaging;
- to line screens and non-periodic screens, parameters given can be applied by analogy.

Although this International Standard does not specify process control for flexographic printing, digital printing systems or letterpress production printing, the production aims defined by this International Standard may be applied when these printing technologies are used and where the printing result is intended to be similar to that produced by coldset offset lithography.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 5-3, *Photography and graphic technology — Density measurements — Part 3: Spectral conditions*

ISO 2846-2, *Graphic technology — Colour and transparency of printing ink sets for four-colour printing — Part 2: Coldset offset lithographic printing*

ISO/TS 10128, *Graphic technology — Methods of adjustment of the colour reproduction of a printing system to match a set of characterization data*

ISO 12647-1:2013, *Graphic technology — Process control for the production of half-tone colour separations, proof and production prints — Part 1: Parameters and measurement methods*

ISO 12647-7, *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*

ISO 13655:2009, *Graphic technology — Spectral measurement and colorimetric computation for graphic arts images*