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**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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 12647-3 was prepared by Technical Committee ISO/TC 130, *Graphic technology*.

This second edition cancels and replaces the first edition (ISO 12647-3:1998) which has been technically revised, in particular the tone value increase values specified, as borne out by the print characteristic curves of Figure 3. Parameters of all process steps have to be adjusted to achieve these curves; they apply irrespective of whether a positive or a negative acting plate making process is used. The reference to letterpress has been removed completely. Some solid colour CIELAB values have been changed slightly in response to demands from the field.

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

## Introduction

When producing a half-tone colour reproduction it is important that the colour separator, proofer 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") and subsequent production of off-press or on-press proof prints from these separations whose purpose is to simulate the visual characteristics of the finished print product as closely as possible.

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 proof or production print produced by coldset offset lithography on newsprint, or half-tone proof designed to simulate this, from a set of half-tone separation films.

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 or proof produced from a set of half-tone colour separation films. Where deemed useful, secondary parameters are also recommended for specification.

Since non-periodic screening and direct-to-plate techniques are common practice within newspaper printing, information on some of the pertinent parameters has been included.

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

## Part 3:

## Coldset offset lithography on newsprint

### 1 Scope

This part of ISO 12647 specifies a number of process parameters and their values to be applied when preparing colour separations for newspaper single or four-colour printing and proofing. The parameters and values are chosen in consideration of the complete process, covering the process stages: “colour separation”, “film setting”, “making of the printing forme”, “proof production” and “production printing”.

This part of ISO 12647 is applicable:

- to coldset offset proof and production printing and off-press proof printing processes on newsprint that use colour separation films rather than digital data;
- by analogy to press printing from printing surfaces produced by direct imaging methods and the corresponding proof printing processes.
- It is not applicable:
- to line screens and non-periodic screens although certain parameters given can be applied by analogy. In particular, the tone value increases specified, apply directly because they refer to control patches that contain periodic screen half-tones;
- to flexo and letterpress production printing although a number of parameters can be applied by analogy.

### 2 Normative references

The following referenced documents are indispensable for the application of this document. 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 — Density measurements — Part 3: Spectral conditions*

ISO 8254-1, *Paper and board — Measurement of specular gloss — Part 1: 75 degree gloss with a converging beam, TAPPI method*

ISO 12647-1:2004, *Graphic technology — Process control for the production of half-tone colour separations, proof and production prints — Part 1: Parameters and measurement methods*

ISO 15930-4, *Graphic technology — Prepress digital data exchange using PDF — Part 4: Complete exchange of CMYK and spot colour printing data using PDF 1.4 (PDF/X-1a)*

ISO 15930-6, *Graphic technology — Prepress digital data exchange using PDF — Part 6: Complete exchange of printing data suitable for colour-managed workflows using PDF 1.4 (PDF/X-3)*