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Second edition
2014-07-15

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

Part 4: Publication gravure printing

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

Partie 4: Processus de gravure



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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 second edition cancels and replaces the first edition (ISO 12647-4:2005), which has been technically revised with the following changes:

- deletion of film based requirements;
- changes in proof requirements;
- changes in printing conditions;
- changes in the colouration of the primary and secondary solids;
- 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*

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Introduction

This part of ISO 12647 lists values or sets of values of the primary process parameters specified in ISO 12647-1 and related technical properties of a gravure publication print. Where deemed useful, secondary parameters are also specified.

The purposes of this part of ISO 12647 are:

- to list and explain the minimum set of primary process parameters required to uniquely define the visual characteristics and related technical properties of a half-tone proof or production print produced from digital data;
- to give the definitions for the general terms necessary for process control;
- to describe the measurement methods and the requirements for reporting the results.

The purpose of a proof print is to simulate the visual characteristics of the finished print product as closely as possible. In order to visually simulate particular print, off-press proofing processes might require values for solid tone coloration and tone value increase which are different from those of the printing process they are meant to simulate. This is caused by differences in phenomena such as gloss, light scatter (within the print substrate or the colorant), metamerism, and transparency. Such differences are likely for those off-press proofing processes in which the print substrate, the colorants, and the technology for applying them are significantly different from gravure publication printing. In such cases, the user or the supplier should ensure that appropriate corrections are specified. Another problem area is the matching of a digital off-press proof to a double-sided print on a less-than-opaque, lightweight printing paper as used in publication gravure printing. If it is deemed necessary, for image quality reasons, to proof with colour management profiles based on measurements with substrate backing rather than black backing, there will be an unavoidable difference between proof and production prints. This fact needs to be communicated to all parties concerned.