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AS ISO 12647.2—2008

Australian Standard®

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

Part 2: Offset lithographic processes



This Australian Standard® was prepared by Committee EX-004, Offset Lithographic Processes. It was approved on behalf of the Council of Standards Australia on 7 August 2008.
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The following are represented on Committee EX-004:

- The Lithographic Institute of Australia
- Printing Industry Association of Australia
- Royal Melbourne Institute of Technology
- TAFE NSW

Additional Interests:

- Graphic Technology Interests
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PREFACE

This Standard was prepared by Standards Australia's Committee EX-004, Offset Lithographic Processes.

This Standard specifies a number of process parameters and their values to be applied when preparing colour separations for four-colour offset printing or when producing four-colour prints by one of the following methods: heat-set web, sheet-fed or continuous forms process printing, or proofing for one of these processes; or offset proofing for half-tone gravure.

This Standard is identical with, and has been reproduced from ISO 12647-2, Ed. 2.0 (2004), *Graphic technology — Process control for the production of half-tone colour separations, proof and production prints — Part 2: Offset lithographic processes*, including Amendment 1: 2007.

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b) In the source text 'this part of ISO 12647' should read 'this Australian Standard'.

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INTRODUCTION

Part 1 of ISO 12647 serves to provide definitions, the general principles, the general order of the material to be covered in the subsequent parts 2 to 6, the definition of the data, the measurement conditions and the reporting style.

This part of ISO 12647 lists values or sets of values of the primary parameters specified in ISO 12647-1 and related technical properties of a half-tone offset lithographic print. Primary parameters include the screening parameters, the tone value increase, the colours of the solids and the print substrate. Conformance to the specified values in proof and production printing assure, in principle, a good visual match between specimens produced. Exceptions from this general observation are discussed in the following paragraph.

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 match a particular print, off-press proofing processes often require values for solid-tone coloration and tone-value increase that 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 offset press printing. In such cases the user or the supplier needs to ensure that appropriate corrections are specified.

Another problem area is the matching of a digital off-press proof on an opaque substrate to a double-sided print on a less-than-opaque, lightweight printing paper as used in heat-set web printing. If the proof is made with colour management profiles based on measurements with white backing, there will be an unavoidable difference between proof and production prints, placed on a black backing in accordance with the specifications of this part of ISO 12647. The possible occurrence of such differences needs to be well communicated, in advance, to the parties concerned.

STANDARDS AUSTRALIA

Australian Standard

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

1 Scope

This part of ISO 12647 specifies a number of process parameters and their values to be applied when preparing colour separations for four-colour offset printing or when producing four-colour prints by one of the following methods: heat-set web, sheet-fed or continuous forms process printing, or proofing for one of these processes; or offset proofing for half-tone gravure.

The parameters and values are chosen in view of the complete process covering the process stages “colour separation”, “film setting”, “making of the printing forme”, “proof production”, “production printing” and “surface finishing”.

This part of ISO 12647 is

- directly applicable to proofing and printing processes that use colour separation films as input;
- directly applicable to proofing and printing from printing formes produced by filmless methods as long as direct analogies to film production systems are maintained;
- applicable to proofing and printing with more than four process colours as long as direct analogies to four-colour printing are maintained, such as for data and screening, for print substrates and printing parameters;
- applicable by analogy to line screens and non-periodic screens.

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 reference document (including any amendments) applies.

ISO 5-3:1995, *Photography — Density measurements — Part 3: Spectral conditions*

ISO 8254-1:1999, *Paper and board — Measurement of specular gloss — Part 1: 75° gloss with a converging beam, TAPPI method*

ISO 12642:1996, *Graphic technology — Prepress digital data exchange — Input data for characterization of 4-colour process printing*

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*

3 Terms and definitions

For the purposes of this document, the definitions given in ISO 12647-1 and the following apply.

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