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Information technology — Method of measuring gloss uniformity on printed pages

Technologies de l'information — Méthode de mesure de l'uniformité de lustre des pages imprimées

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
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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.

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ISO/IEC 19799 was prepared by Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 28, *Office equipment*.

Introduction

The purpose of this International Standard is to provide a process for measuring objective print quality attributes for gloss non-uniformity on printed pages in reflection mode.

This International Standard prescribes the following:

— a definition of gloss uniformity attributes representative of the print quality on reflection prints;

— a procedure for gloss uniformity testing and the analysis of the resulting data;

— a method for evaluating and grading these measurements and deriving an assessment of gloss uniformity, enabling a means to correlate the objective gloss uniformity measurement to subjective impression of gloss uniformity if appropriate; and

— the appropriate method of describing the gloss uniformity of printing and copying systems in documentation supplied to the consumer by the manufacturer.

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1 Scope

The scope of this International Standard is to define methods and processes of measuring objective print-quality attributes for the assessment of gloss non-uniformity on printed pages in reflection mode, and to provide transforms, when applicable, that relate the objective results to subjective responses, if appropriate. There are many existing standards (see Normative references and Bibliography for details) typically used for gloss measurement. Our intent is to leverage the existing standards and adapt those for use on gloss uniformity measurements where appropriate.

This International Standard is composed of a standardized test methodology, which is based on established gloss measurement methodologies as noted in Clause 2 and in the Bibliography. The methodologies have been modified so that, when applied to printed pages created by different marking technologies and imaging algorithms on different substrates, the results indicate the level of the objective gloss uniformity of the printed pages (in reflection mode). If the objective measurement can be linked to the subjective impression of gloss uniformity, then the linkage from objective measurement to subjective impression via mathematical transforms is provided. The reflection prints that are to be used as the subject of these tests can be created via printers or copiers (analog and digital). This International Standard should be applied only to electro-photographic bases prints. When more reflection prints made by other printing technologies become available for follow-up study, one may consider including those printing technologies in this International Standard as a revision. This International Standard does not address the measurement of gloss attributes of printed pages in transmission mode.

Gloss uniformity attributes currently included in this International Standard are: differential gloss, gloss uniformity within a page, and gloss consistency within a run. Due to the current level of immaturity of commercially available objective micro-gloss measurement instruments, gloss artefact attributes (such as gloss grain, gloss spot, gloss streak, gloss band, gloss mottle/cloud, gloss moiré) are not included in this International Standard at the present time, since instrumented measurement procedure cannot be recommended at present. As instrumented measurement capability becomes available, they will be considered for adoption into this International Standard as a revision.

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 2813, *Paints and varnishes — Determination of specular gloss of non-metallic paint films at 20°, 60° and 85°*

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