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Photography — Photographic reflection prints

Part 3: Evaluation of glossiness

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National foreword

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Foreword

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This document was prepared by Technical Committee ISO/TC 42, *Photography*.

A list of all parts in the ISO 20791 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

Glossiness is an optical property regarding reflected light from print surfaces. Many studies have been conducted on glossiness of industrial materials, and several studies have been reported on print materials as well, see References [1] to [6]. It is especially important for photographic prints with respect to printed image characteristic, because there is a wide variety from very high glossy to dead matte surfaces. As stated in ISO/TR 20791-1, several properties affect the gloss perception of photographic prints, see References [7]. Specular gloss and image clarity (distinctness of image) are the two major properties among them. The former relates to the perceived intensity of reflected light and the latter relates to the sharpness of reflected image. There is also a study stating that perceived glossiness of photographic prints is well represented by the combination of these two measurements, specular gloss and image sharpness[8].

Some measurements for properties regarding glossiness have been standardized for industrial materials such as coatings, plastics and papers, see References [9] to [12] and ISO 17221. Among them, the measurement methods for coatings are standardized with specular gloss and image clarity as important properties for the reflection characteristics. Some standards for graphic printing and office printing basically refer to them while adding methods and cautions specific to each application[13] [14]. But there has been no published standard for measuring both specular gloss and image clarity for photographic prints.

This document provides the measurement methods of two major properties to evaluate glossiness of photographic prints: specular gloss and image clarity. The methods are based on the existing documents for coatings and plastics, and specific requirements for photographic prints are defined regarding sample preparation, measurement procedure and reporting.

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TECHNICAL SPECIFICATION **ISO/TS 20791-3:2023**

Photography — Photographic reflection prints —

Part 3: Evaluation of glossiness

1 Scope

This document describes the characterization of glossiness of photographic reflection prints, which consists of specular gloss measurement and image clarity measurement. This document is applicable to any photographic printing technology such as inkjet, thermal dye transfer, electrophotography and silver halide technologies.

NOTE The level of preferred glossiness depends on the application.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 gloss value at 20°, 60° and 85°*

ISO 17221, *Plastics — Determination of image clarity (degree of sharpness of reflected or transmitted image)*

ISO 18913, *Imaging materials — Permanence — Vocabulary*

3 Terms and definitions

For the purposes of this document, the following terms and definitions given in ISO 18913 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1 Terms

3.1.1
glossiness
visual characteristic related to shiny and smooth appearance

Note 1 to entry: Based on this appearance, humans perceive features such as reflection characteristics and roughness of the surface of an object.

3.1.2
specular gloss
ratio of the luminous flux, reflected by the test surface into a specified aperture at the angle of specular reflection, to that from a standard specularly reflecting surface under the same conditions

[SOURCE: ISO 4046-5:2016, 5.107, modified — Note 1 to entry was deleted.]

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