



BSI Standards Publication

Imaging materials — Pictorial colour reflection prints — Comparison of image degradation observed between ISO 18930 accelerated weathering test method and outdoor exposure

National foreword

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TECHNICAL REPORT

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Imaging materials — Pictorial colour reflection prints — Comparison of image degradation observed between ISO 18930 accelerated weathering test method and outdoor exposure

*Matériaux pour l'image — Réflexion des impressions photographiques
en couleurs — Comparaison de la dégradation de l'image observée
entre la méthode d'essai de vieillissement accéléré de l'ISO 18930 et
l'exposition extérieure*



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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).

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

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.

Introduction

Printed digital images are used in many applications in which they are exposed to outdoor weathering. ISO 18930 provides standardized test procedures to evaluate image stability both in real-time outdoor weathering tests and in accelerated laboratory simulations of the weathering process. Accelerated laboratory weathering tests have been developed as a result of the desire to obtain test results faster than would be obtained by actual outdoor exposure. However, accelerated weathering tests only have value if they can be correlated with actual outdoor performance.

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1 Scope

This document describes the experimental framework, results, and conclusions from a round robin test that was performed in order to establish correlations between accelerated weathering according to the ISO 18930 test method and outdoor weathering at nine outdoor sites.

The types of digital printing technology that were used in this round robin test are aqueous inkjet, solvent inkjet, UV curable inkjet, digitally-exposed silver halide, and thermal mass transfer. The image print stability data and correlations of this document are to be considered illustrative of the performance of these classes of materials. Extension of these correlations to other classes of materials, such as dye sublimation, is verified by appropriate experimentation.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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 <http://www.electropedia.org/>

3.1

digital printing media

recording elements used by digital printers to receive inks or pre-formed colourants

EXAMPLE The substrate may be paper, plastic, canvas, fabric, metal, or other ink-receptive material; the substrate may, or may not, be coated with an ink-receptive layer. The category of digital printers includes inkjet, electrophotographic, and thermal transfer.

3.2

lamine

overlamine

layer of material that goes over the top or bottom of a specimen

Note 1 to entry: Usually to provide water-resistance, physical, and/or ultraviolet (UV) light protection of the specimen during a weathering test. A layer of protective film is applied with a pressure-sensitive or heat-activated adhesive.

3.3

accelerated laboratory weathering

simulated weathering where instruments (weathering devices) are used to obtain very controlled conditions that simulate, to some degree, and generally accelerate, the outdoor weathering results

Note 1 to entry: The use of such instruments is described in ISO 4892-1[2] and ASTM G151[16].