International Standard

ISO 18948

Imaging materials — Photo books — Test methods for permanence and durability

Matériaux pour l'image — Albums photos — Méthodes d'essai de permanence et de durabilité

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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 document 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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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

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

This second edition cancels and replaces the first edition (ISO 18948:2018), of which it constitutes a minor revision.

The changes are as follows:

— two editorial clarifications in Terms and definitions;

— minor punctuation and grammar changes in Clauses 4 and 6;

— consistency of calculation terms in Clause 7;

— minor editorial clarifications in the annexes.

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

Photo books are bound books with printed pages comprised of integrated photos, along with artwork and text, designed by and usually dedicated to a limited group of people.

Like photographic prints, photo books are produced on the widest available spectrum of production, from large run commercial facilities to one-off home kits. Their expected permanence and durability can cover a similarly broad range. Careful consideration should be given to the materials used in the construction of photo books to insure high permanence of the printed images[33] and of the books themselves[34].

Photo books are typically stored in a closed condition, either in a stack or on a book shelf; consequently environmental factors that may adversely affect displayed prints, such as light and ozone, may not be applicable to the preservation of the inside pages of a photo book. The user is cautioned that these factors may become relevant if the photo book is displayed or otherwise exposed to light or other environmental factors for an extended period of time. ISO 18937 (all parts) and ISO 18941 provide guidelines on testing for the effect of light and ozone on photo books.

The test methods included in this document assume that the photo book will be stored and used in environments that may or may not be climate controlled. For this reason, it includes test conditions designed to assess the adverse effects of humidity and temperature that may be outside of recommended long-term and medium-term storage conditions as described in ISO 18920. It also includes test conditions intended to simulate short duration exposure of photo books to the interior of a hot vehicle.

This document contains many specific tests for various binding systems and printing processes. It is not the intention of this document to require that all possible combinations be tested. Testing all combinations of sizes, cover materials, binding options and printing processes is not possible due to the large number of combinations. However, testing representative combinations of materials is encouraged.

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Imaging materials — Photo books — Test methods for permanence and durability

1 Scope

This document specifies test methods to assess the permanence and durability of photo books, including cover and pages.

This document is applicable to photo books which contain reflection colour prints made with colour hardcopy materials of all types, including those from either traditional analogue printing or modern digital printing processes. The same performance test methods apply, regardless of the printing process. Because of the large number of combinations of sizes, cover materials, binding options and printing processes, testing of all possible combinations is not within the scope of this document. Instead, a representative selection of printed pages, cover materials and binding options that are used in the makeup of the photo book are tested.

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 527-3, *Plastics — Determination of tensile properties — Part 3: Test conditions for films and sheets*

ISO 11800:1998, *Information and documentation — Requirements for binding materials and methods used in the manufacture of books*

ISO 18924, *Imaging materials — Test method for Arrhenius-type predictions*

ISO/TR 18931, *Imaging materials — Recommendations for humidity measurement and control*

ISO 18936, *Imaging materials — Processed colour photographs — Methods for measuring thermal stability*

ISO 18937 (all parts), *Imaging materials — Methods for measuring indoor light stability of photographic prints*

ISO 18941:2020, *Imaging materials — Colour reflection prints — Test method for ozone gas fading stability*

ISO 18946, *Imaging materials — Reflection colour photographic prints — Method for testing humidity fastness*

ISO 18949, *Imaging materials — Reflection colour photographic prints — Method for testing stability under low humidity conditions*

ISO 19594, *Graphic technology — Test method for the determination of the binding strength for perfect-bound products — Page-pull test working upwards*

ASTM F904, *Standard Test Method for Comparison of Bond Strength or Ply Adhesion of Similar Laminates Made from Flexible Materials*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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

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