
**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 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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on 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 the following URL: www.iso.org/iso/foreword.html.

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

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^[32] and of the books themselves^[33].

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 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.

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 18913, *Imaging materials — Permanence — Vocabulary*

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

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

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

ISO 18937, *Imaging materials — Photographic reflection prints — Methods for measuring indoor light stability*

ISO 18941:2017, *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 18949¹⁾, *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*

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