

# Imaging materials — Processed photographic reflection prints — Storage practices

ICS 37.040.20

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# National foreword

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The UK participation in its preparation was entrusted to Technical Committee CPW/42, Photography, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

## Cross-references

The British Standards which implement international publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

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## Summary of pages

This document comprises a front cover, an inside front cover, the ISO title page, pages ii to vi, pages 1 to 18, an inside back cover and a back cover.

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**Imaging materials — Processed  
photographic reflection prints — Storage  
practices**

*Matériaux pour image — Tirages photographiques traités par réflexion —  
Directives pour l'archivage*



Reference number  
ISO 18920:2000(E)



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 18920 was prepared by Technical Committee ISO/TC 42, *Photography*.

This first edition cancels and replaces the fourth edition of ISO 6051 (ISO 6051:1997), and is mainly an editorial revision.

This International Standard is one of a series of standards dealing with the physical properties and stability of imaging materials. To facilitate identification of these International Standards, they are assigned a number within the block from 18900 to 18999 (see annex A).

Annexes A to I of this International Standard are for information only.

## Introduction

Photographic and other reflection prints, including hard-copy output from digital imaging systems, have become increasingly important as documentary and pictorial reference material in archives, libraries, government, commerce and academia. This has focused attention on the importance of the preservation of such materials to ensure their longest possible life.

The stability and useful life of photographic reflection prints depend on their physical and chemical properties and the processing, as well as on the conditions under which they are stored and used. This International Standard provides recommendations on proper storage conditions and practices.

The important elements affecting the useful life of photographic reflection prints during storage are as follows:

- relative humidity and temperature of the storage environment;
- hazards of fire, water, and light exposure;
- fungal growth and other micro-organisms;
- contact with certain chemicals in solid, liquid, or gaseous form;
- physical damage.

The extent to which the relative humidity and temperature of the storage environment, or variations of both, can be permitted to reach beyond recommended limits without producing adverse effects will depend upon the duration of exposure, biological conditions conducive to fungal growth, and the accessibility of the atmosphere to the print surfaces.

The term “archival” is no longer used to express longevity or stability in International Standards on imaging materials since it has been interpreted to have many meanings, ranging from preserving documents “forever”, which is unattainable, to temporary storage of actively used materials.

This International Standard defines two levels of recommended storage conditions: medium-term and extended-term. Medium-term storage conditions can be used to preserve information for a minimum of 10 years. Extended-term storage conditions shall be used when it is desired to preserve information for as long as possible, and these conditions will prolong the life of all prints, even those not optimized for permanence.

The space requirements and costs for establishing and operating the two levels of storage conditions (medium-term and extended-term) differ significantly. Furthermore, the specified limits of temperature and relative humidity for both sets of storage conditions may not be realizable due to budgetary constraints, energy considerations, climatic conditions, building construction, etc. However, it must be recognized that any deviation from the specified conditions will reduce the effectiveness of the storage environment. If such deviation is unavoidable, the lowest possible storage temperature should be provided. In any event, the best preservation of prints will be attained with extended-term storage conditions.

The recommendations of this International Standard for the storage of photographic reflection prints encompass the following:

- storage enclosures, housing, and rooms;
- atmospheric and environmental conditions;
- fire protection;

— handling and inspection procedures.

With the exception of fire and associated hazards that are sufficiently common to warrant inclusion of protective measures, this International Standard does not pertain to means or methods for protecting photographic reflection prints against natural or man-made catastrophes.

# Imaging materials — Processed photographic reflection prints — Storage practices

## 1 Scope

**1.1** This International Standard specifies dark storage conditions, storage facilities, and procedures for the handling and inspection of photographic reflection prints of all types and sizes.

**1.2** This International Standard is applicable to photographic reflection prints on the following opaque supports:

- fibre-base paper;
- RC (resin coated) paper;
- plastic films (polyester, cellulose acetate, etc.).

**1.2.1** This International Standard is applicable to the following black-and-white silver gelatin prints:

- wet-processed, including those that have been chemically treated to improve the permanence of the silver image and/or to modify its colour (e.g. with gold, selenium or sulfur formulations);
- diffusion transfer (e.g. Polaroid and Fuji Photo Film instant prints<sup>1)</sup>);
- stabilization-processed (which contain the silver image as well as invisible, chemically stabilized silver halides);
- heat-processed.

**1.2.2** This International Standard is applicable to the following multicolour and monochrome photographic prints:

- chromogenic, washed and stabilized;
- silver dye bleach;
- dye transfer;
- diffusion transfer (e.g. Polaroid and Fuji Photo Film instant prints<sup>1)</sup>, peel-apart or integral);
- pigmented gelatin (carbon, carbonyl, etc.).

**1.2.3** This International Standard is applicable to black-and-white and colour photographic reflection prints made with the following systems:

- thermal dye transfer (commonly referred to as dye sublimation);

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1) Polaroid and Fuji Photo Film instant prints are examples of suitable products available commercially. This information is given for the convenience of users of this International Standard and does not constitute an endorsement by ISO of these products.