INTERNATIONAL STANDARD

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Imaging materials — Unprocessed photographic films and papers — Storage practices

Matériaux pour l'image — Films et papiers photographiques non traités — Pratiques de stockage

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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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 2.

The main task of technical committees is to prepare International Standards. 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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 18928 was prepared by Technical Committee ISO/TC 42, *Photography*.

This third edition cancels and replaces the second edition (ISO 18928:2002), of which it constitutes a minor revision with the following changes:

— Annex A has been removed.

Introduction

International Standards have been written specifying the recommended practices for the storage of processed safety photographic film (ISO 18911), processed photographic reflection prints (ISO 18920), processed photographic plates (ISO 18918), and the specifications for safety film (ISO 18906).

This International Standard is concerned with the storage of unprocessed photographic materials. While many of the recommendations for unprocessed and processed storage are very similar, there are some important differences. These include the very beneficial effects of low temperature and the harmful effects of adverse storage and radiation.

Imaging materials — Unprocessed photographic films and papers — Storage practices

1 Scope

This International Standard specifies recommended storage conditions for unprocessed photographic materials. It is not applicable to processed films and prints.

This International Standard is applicable to black-and-white and colour photographic materials (negative films, positive films, reversal films, positive papers, and X-ray films), as well as to safety films.

2 Terms and definitions

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

2.1
raw photographic material
photographic material that has not been exposed to actinic radiation and has not been processed

3 Storage conditions

3.1 General

The photographic properties of imaging materials change during ageing. These changes result from high temperatures and high relative humidities and may also be influenced by plastics, papers, solvents, lacquers, varnishes, gases (see 3.4), and extraneous radiation (see 3.5). Frequent temperature changes may also have adverse effects.

Changes caused by unfavourable storage conditions may be much greater than those due to variations in original manufacture. It is important to comply with the manufacturer's recommended storage conditions and, where given, to an expiration date.

Films and papers should be exposed and processed as soon as possible after the original package has been opened. Opened packages should be resealed under recommended conditions for further storage.

3.2 Relative humidity

Photographic material should generally be kept in equilibrium with 40 % to 60 % relative humidity (RH). Containers shall be kept sealed until the material is used.

Films and papers are not usually stored for long periods between exposing and processing. Production schedules, customer needs, latent image fading or growth, etc., are important factors here. Furthermore, vesicular, diazo, thermally processed silver, and electrographic type materials are normally processed immediately.

If conventional sheet films or papers are not to be processed immediately, they may be stored in commercially available light-tight "paper safes" or in the manufacturer's original container.

The relative humidity of the storage area shall be maintained below 65 % because higher humidities can damage containers (e.g. rust), cause labels, tapes and cartons to deteriorate, and encourage the growth of fungi. It can also induce adhesion (blocking) between adjacent laps or layers.

Humidities below 30 % can make film and paper temporarily brittle and lead to unacceptable curl and possible emulsion cracking.