STORAGE AND DISPLAY MATERIALS FOR PHOTOGRAPHS: Criteria for Selection

THE TWO INTERNATIONAL STANDARDS

ISO 18902:2013 [E]
Imaging materials--Processed imaging materials--Albums, framing and storage materials

This international standard specifies chemical and physical requirements for all storage and display materials which are in direct or close contact with the following traditional and digital hardcopy photographs*: black-and-white or color, reflection prints or negatives, made with silver-halide, silver dye bleach, inkjet, electrophotographic, or dye diffusion thermal transfer processes.

Storage and display materials include all paper, paperboard, and plastic sleeves, envelopes, folders, mat board, boxes, interleaving, frames, albums, and other formats. Also covered are items constructed with and of metal, adhesives, and writing, labeling and printing materials.

> *The standard does not mention many 19th century and common photographic processes, the component(s) of which are known to be pH sensitive, including dye transfer, cyanotype, salted paper, albumen, collodion, platinum, and diazotype; this omission implies that buffered storage materials should not be used. Research supports avoiding buffered materials in contact with cyanotypes; alkaline and neutral pH materials have been shown to fade cyanotypes under the conditions of the PAT test. There is anecdotal evidence of contact with buffered housing materials, even under ISO recommended environmental conditions, causing deterioration in some of the photographic processes in this list. However, there is no consensus in the photographic conservation community concerning processes other than cyanotype.

ISO 18916:2007
Imaging Materials--Processed imaging materials--Photographic activity test for enclosure materials

The PAT is an accelerated aging test which incubates, at high temperature and humidity, samples of the product in question with the basic components of photographs. Any change indicates that the product might degrade photographic materials stored in or close to it.

You should select products which the manufacturer has tested with the PAT. Materials that pass the PAT do not automatically meet the criteria in the first ISO standard; however, you can usually assume that a product is safe to use based on this test along with a general knowledge of the ISO standards.

ISO SPECIFICATIONS

General Qualities

- Chemically and physically inert with respect to the photographic materials
- Passes the PAT test
- No rubber-based adhesives

Additional Criteria for PAPER PRODUCTS

- Acid-free = pH of 5.5 to 10
- Buffered = 2% alkaline reserve
- Lignin-free = KAPPA of 7 or less
- No post-consumer recycled material
- Colorants are non-bleeding
- Album bindings need not pass the PAT or meet all criteria if not in direct contact with photographs
- Balanced seam construction for envelopes, with seams narrow and wrinkle-free

Additional Criteria for PLASTIC PRODUCTS

- No cellulose nitrate, cellulose acetate, PVC (polyvinyl chloride), or plasticized plastics
- Polyester [poly(ethylene terephthalate)], polypropylene, polyethylene, polystyrene and spun-bonded polyolefins are generally suitable

PAPER vs PLASTIC

Advantages and Disadvantages to PAPER

- Opaque = decreases light exposure but often leads to more handling
- Easy to label with a soft pencil
- Porous, breathable, absorptive = preferred for cellulosic films
- Less expensive than most plastics

Advantages and Disadvantages to PLASTIC

- Visibility reduces handling but increases light exposure
- More durable than paper
- More rigid ones provide additional support for weak/brittle objects
- Non-porous = prevents cross contamination with poor quality materials, such as sticky tapes
- Electrostatic charge = keeps thin or light objects from shifting
- but attracts dust or can lead to abrasion, or lift flaking or friable media
- Recommended for storage materials in contact with digital prints, such as interleaving

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