HOUSING MATERIALS for PHOTOGRAPHS

The 2 International Standards

ISO 18902:2007 *Imaging materials–Processed imaging materials–Albums, framing and storage materials*

This international standard specifies the chemical and physical requirements for all housing materials which are in direct or close contact with photographic materials. These include all paper, paperboard, and plastic sleeves, envelopes, folders, mat board, boxes, interleaving, slide mounts, framing materials, and other formats.

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.
Select products which the manufacturer has tested with the PAT. Materials which 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* and a general knowledge of the ISO standards.

ISO Specifications

Necessary Qualities

- Material is chemically and physically stable
- Construction of enclosure is sound and sturdy
- Surface is smooth and non-abrasive
- Passes the PAT

Additional Criteria for PAPER PRODUCTS

- High alpha cellulose content from rag, cotton, and/or chemically purified wood pulp
- pH of 7.0 to 9.5 $\pm$ 0.2
- Alkaline reserve - 2% or more calcium carbonate or chemical equivalent
- “Lignin free” ($\leq$ 1%)
- Minimum of alkaline or neutral pH sizing, e.g. no alum-rosin sizing
- No metal particles, waxes, or plasticizers
- Less than .0008% reducible sulfur
- Colorants are non-bleeding
- No glassine or magnetic albums
- Album covers need not pass the PAT or meet all criteria if not in direct contact with photographs

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ISO Specifications - continued

Additional Criteria for PLASTIC PRODUCTS

- Inert, stable
- Minimal plasticizer content
- Minimal slip and antiblocking agents
- Polyester is always a good choice: the most inert, dimensionally stable, and rigid
- Polypropylene, polyethylene, polystyrene or spun-bonded polyolefin are generally suitable.
- No cellulose nitrate, cellulose acetate, or PVC (polyvinyl chloride).

PAPER vs. PLASTIC for Enclosures

Advantages and Disadvantages to PAPER

- Easier to label
- Porous, breathable, absorptive – preferred for deteriorating negatives
- Opaque - decreases light exposure but often leads to more handling

Advantages and Disadvantages to PLASTIC

- Visibility reduces handling but increases light exposure
- Non-porous – prevents cross contamination with poor quality materials, such as sticky tapes
- More durable than paper
- More rigid ones provide additional support for weak/brittle material
- Electrostatic charge - keeps thin or light objects from shifting but attracts dust or can lift off flaking or friable media