

HOUSING MATERIALS FOR PHOTOGRAPHS: CRITERIA FOR SELECTION

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QUALITY CRITERIA for PAPER PRODUCTS

These criteria address chemical and physical qualities and should be applied to all housing and storage formats made of paper or paperboard (sleeves, folders, mat boards, boxes, interleaving, etc.). The specifications of the American National Standards have been summarized.

Meets specifications of ISO 18902:2007 “Imaging materials – Processed imaging materials – Albums, framing and storage materials” including:

All paper products

- ❖ Material is chemically stable
- ❖ pH of 7.0 to 9.5
- ❖ Alkaline reserve - 2% or more calcium carbonate or chemical equivalent -- (e.g. 1.6% zinc oxide or magnesium carbonate)
- ❖ No acids or peroxides
- ❖ Surface is smooth and non-abrasive
- ❖ Colorants are non-bleeding
- ❖ No glassine

Only for paper in direct contact with photographic materials

- ❖ High alpha cellulose content from rag, cotton, and/or chemically purified wood pulp.
- ❖ Lignin free, no “ground wood”
- ❖ Minimum of alkaline or neutral pH sizing, e.g. no alum-rosin sizing
- ❖ No metal particles, waxes, or plasticizers
- ❖ Less than .0008% reducible sulfur
- ❖ Passes the Photographic Activity Test (PAT) – refer to page 2

QUALITY CRITERIA for PLASTIC PRODUCTS

These criteria address chemical and physical qualities as well as types of plastics. They should be applied to all housing and storage formats made of plastic. Thin, transparent film is the most common form (e.g. sleeves) but corrugated boards and opaque, spun bonded sheets are gaining popularity. The specifications of the American National Standards have been summarized.

Meets specifications of ISO 18902:2007 “Imaging materials – Processed imaging materials – Albums, framing and storage materials” including:

- ❖ Inert, stable
- ❖ Minimal or low plasticizer content
- ❖ No surface coatings or slip agents, e.g. silica dioxide
- ❖ Passes the Photographic Activity Test (PAT)
- ❖ Polyester (best), polypropylene, polyethylene, polystyrene or spun-bonded polyolefin only acceptable types. Polyester (polyethylene terephthalate) most inert, dimensionally stable, and rigid; e.g. Melinex 516 (ICI). Polyethylene least rigid and most easily marred.

The Photographic Activity Test (PAT), 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 in the latter indicates that the product might deteriorate photographic materials stored in or close to it. Samples are tested so that potential trouble areas are included, e.g. the seam in an envelope. When buying enclosures, select products which the manufacturer has tested with the PAT. If large quantities of one material are purchased, have samples tested by an independent lab before accepting it because the composition can vary from batch to batch. Materials which pass the PAT do not automatically meet the other criteria; however, major manufacturers tend to select only their highest quality products for PAT testing, so that *the buyer can usually assume that the product is safe to use based on this test alone and common sense.*

CHOOSING BETWEEN PAPER and PLASTIC for ENCLOSURES

Advantage and Disadvantages to Plastic

- ❖ Visibility reduces handling
- ❖ More rigid ones provide additional support for weak/brittle material
- ❖ Durable compared to paper
- ❖ Non-porous - prevents cross contamination with poor quality material, but traps off gassing
Electrostatic charge - can lift off flaking or friable media and attract dust, but keeps thin or light objects from shifting
- ❖ Expensive compared to paper
- ❖ No protection from light

Plastic Preferred over Paper For...

- ♦ Photos with sticky tapes or adhesives (polyester)
- ♦ Weak, brittle or damaged photos need the additional support

- ♦ Thin prints, because the static force holds them in place

Advantages and Disadvantages to Paper

- ❖ Easier to label
- ❖ Porous, breathable, absorptive
- ❖ Inexpensive compared to plastic
- ❖ Opaque - decreases light exposure but often creates need for more handling for viewing
- ❖ Buffered papers neutralize acidic deterioration products

Paper Preferred over Plastic For...

- ♦ Nitrate or acetate base negatives to allow off gassing
- ♦ Materials in cold storage
- ♦ Poorly processed prints (either for entire enclosure or inclusion in plastic one)

Buffered Paper Preferred For...

- ♦ Nitrate or acetate negatives to help absorb deterioration products
- ♦ Platinum prints (either for entire enclosure or inclusion in plastic one)
- ♦ Poorly processed prints (either for entire enclosure or inclusion in plastic one)
- ♦ Acidic mount boards (either for entire enclosure or inclusion in plastic one)
- ♦ If only one type can be selected.

Unbuffered Paper Preferred For...

- ♦ Cyanotypes or blueprints