

Protecting and Displaying Black-and-White Prints



You've captured the ultimate black-and-white image. Now you want to do all that you can to ensure the longest possible life for your black-and-white print.

Many factors can affect the life of a photographic print. The following conditions can all contribute to degradation of prints on resin-coated or fiber-base papers:

- Improper processing
- Light
- Heat
- Humidity
- Atmospheric and environmental contamination
- Fungus and bacterial growth
- Surface contamination
- Abrasion

Photographic prints can have a long, useful life when they're properly processed, displayed, and stored. Your prints will exhibit good stability if you protect them by following these recommendations:

Processing: If you process your own prints, closely follow the manufacturer's processing recommendations. Use fresh fixer, and be sure not to use the fixing bath beyond the recommended capacity. Wash your prints for the recommended time. Residual silver salts and traces of fixer in the paper may cause stains, uneven tones, and fading. Dry prints thoroughly.

If you have a professional lab process your prints, choose a lab that follows the processing recommendations for long-term keeping.

Treatment with Toner Solution: The silver image in a black-and-white print is subject to deterioration by external contamination such as fumes from oil-base paints, engine exhausts, and cosmetics. To reduce the effects of these contaminants, treat your prints with a toner such as KODAK PROFESSIONAL Rapid Selenium Toner, KODAK PROFESSIONAL Brown Toner, KODAK PROFESSIONAL Sepia II Warm Toner, or KODAK PROFESSIONAL Sepia Toner. Toners that contain gold chloride also extend print life, but are less effective and more expensive.

It's best to tone your prints as soon as possible after processing. Prints toned after storage may show stains due to adverse storage conditions.

If you don't want to change the appearance of your print but want to protect it from contaminants, you can choose a toner and dilution that will provide protection without altering the image color. For more information on KODAK Toners and toning techniques, see KODAK Publication No. G-23, *Toning KODAK Black-and-White Materials*.

Avoiding Contamination: Atmospheric or environmental contamination can be subtle. Oxides of sulfur and nitrogen from chemical and engine fumes, new plastic materials such as tablecloths, home fireplaces, fresh paint, new carpeting, gases from food preparation, and aerosol sprays can all spread contaminants that can cause harm, such as overall yellowing or red spots.

Avoid displaying and storing prints in an environment where they're exposed to atmospheric contaminants. Proper handling of prints can prevent surface contamination from foods, cosmetics, cleaning agents, polishes, medicines, printing inks, and adhesives.

Lacquering: Use lacquers with caution. Some lacquers yellow with age. If you choose to lacquer your prints, select a lacquer that's specifically intended for photographic applications. Apply multiple light coats rather than a single thick coating. Do not allow a lacquered print to come into contact with the glass in a picture frame, because it may stick to the glass.

Laminating: Laminating is really a variation of lacquering. Instead of applying a very thin polymer layer, laminating produces a much thicker layer. Laminates may contain UV absorbers, plasticizers, and matting agents. Laminates provide protection against fungus and bacterial attack, moisture and dirt in the air, and physical abrasion. However, like lacquers, some laminates tend to yellow with age.

For more information on lacquering and laminating resin-coated prints, see KODAK Publication No. E-67, *Finishing Prints on KODAK Water-Resistant Papers*.

Mounting: Mounting provides rigidity, helps prevent wrinkling, and gives some physical protection to prints.

For long-term keeping, it is best not to use adhesives or dry-mounting tissue. The best mounting method is to use plastic corners or hinge the print by using Japanese rice paper and water-soluble wheat paste. Do not use rubber cement, contact cement, or animal glue.

If you choose to dry-mount your prints, use acid-free, pH-buffered, conservation-quality mounting board and conservation-quality mounting tissue.

Note: Mounting glossy resin-coated prints with dry-mounting tissue can introduce an "orange peel" effect.

An overmat, or window mat, will help protect a print from abrasion, keep the print surface away from the glass in a frame, and provide a neutral or complementary field. Be sure to use conservation-quality mat boards and backing.

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Framing: If you plan to display your prints for more than a few months, a frame with glass will provide protection against physical damage, airborne dirt and grease, oxidizing gases, and other pollutants.

Avoid frames made from materials known to emit vapors that cause image damage—for example, frames of bleached wood and those that are varnished, stained, or oiled. Frames made of clean glass, metal, and some plastics are usually considered “safe.”

Protect framed prints with a sheet of UV-absorbing glass. Do not use acrylic or UV-absorbing acrylic glazing, because those materials are porous to atmospheric contaminants. Always provide a slight separation between the print and the glass. An overmat will provide a separation while enhancing print appearance.

Carefully clean picture-frame glass with a non-ionic liquid dish detergent such as Joy or Ivory liquid, rinse it thoroughly with hot water, and dry it completely before inserting your print into the frame.

Controlling Light, Heat, and Humidity: Carefully consider the location for displaying your prints. Provide only enough light for comfortable viewing, and avoid direct daylight. Tungsten or ultraviolet-free fluorescent light is preferable to daylight.

Avoid displaying or storing prints where the temperature rises above 75°F (24°C). The relative humidity should be between 30 and 50 percent. Humidity that's too low can cause cracking and curling; high humidity can accelerate unwanted chemical reactions. Print emulsions contain nutrients that are attractive to living organisms, and warm, moist environments encourage the growth of fungi and molds.

MORE INFORMATION

Kodak has many publications to assist you with information on Kodak products, equipment, and materials.

The following publications are available from Kodak Customer Service or from dealers who sell Kodak products, or you can contact Kodak in your country for more information.

E-30	<i>Storage and Care of KODAK Photographic Materials—Before and After Processing</i>
E-67	<i>Finishing Prints on KODAK Water-Resistant Papers</i>
G-23	<i>Toning KODAK Black-and-White Materials</i>

For the latest version of technical support publications for KODAK PROFESSIONAL Products, visit Kodak on-line at:
<http://www.kodak.com/go/professional>

If you have questions about KODAK PROFESSIONAL Products,

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