CONSERVATION TIPS: Advice for Framing Textiles

The method used in framing a textile can have a significant effect on its preservation. Several important choices can be made that will affect the textile's longevity. These include the type and quality of materials used, the technique used, and the glazing used.

Mat & Backing Boards

Poor quality mat and corrugated board contain harmful substances and should be avoided: these substances lead to the formation of acids that damage textiles. Look at the bevel or cut edge of the window in a mat and if it is no longer white but tan, beige or brown, this is a good indication that the board is acidic. Acidic board will damage a textile that it touches, accelerating the item's deterioration by accelerating weakening of its fibers, leading to brittleness and making it yellow.

For optimal preservation, the board used to make a window mat, shadow box lining and mount backboard should be free of acid and lignin. This means that the board has been manufactured to be free of impurities and to have a pH of 8 to 8.5. It should also have a buffer to neutralize acids that may develop over time.

There is a misconception that rag board is always acid free.Ê If rag board has been made with an alum rosin sizing, then the board will become acidic. Boards made from ground wood pulp contain lignin, a naturally occurring substance in wood. This turns brown and acidic over time and must be removed during manufacture to meet preservation standards. Only board made of cotton or chemical (not ground) wood pulp that has a pH of at least 7, with the lignin removed, and using a sizing that will not become acidic, will be acid free.

A dust cover can be applied to the reverse of any frame further minimizing airflow and thereby protecting the artifact. Common materials used for dustcovers in the museum community include Tyveck, acid-free barrier paper or a 2-ply acid-free board. The Tyveck and acid-free barrier paper is held in place with 3M No. 415 polyester double stick tape to the reverse of the frame. Two-ply boards are secured with small brass pan head screws.

Light & Glazing

Visible and non visible light deteriorates textiles. The symptoms include fading, darkening, yellowing and other changes in color, as well as embrittlement. It is important to limit the amount of visible light that reaches the fabric. Use light judiciously: avoid fluorescent light and direct sunlight, and keep all light as low as practical.

There are three glazing choices that are suitable to use when framing a textile. They are ultraviolet filtering Plexiglas, ultraviolet filtering glass and ultraviolet filtering non-glare glass. UV filtering Plexiglas will not break if dropped, and it is light weight. However, it is easily scratched during cleaning and will build up an electro static charge strong enough to lift errant or partially disengaged threads from the surface of a textile. UV filtering glass and non-glare glass will break if dropped. However, they will not scratch during cleaning and do not build up an electro static charge. It should be understood that non-glare glass must have a UV filter to protect the textile. Using non-glare glass without UV filtering is like using regular glass. The only time UV filtering glass is not necessary for framing any artifact is when there is no UV and only moderate artificial light.

The textile must never touch the glazing. A space of at least three-eighths inch (3/8") is recommended though more space is often necessary for embroidered textiles. If condensation occurs, which is not uncommon, the textile may absorb the water and develop a tide line or stain. This problem is easily avoided. If there is a window mat, the mat should be thick enough to create a space between the item and the glass. If you do not use a window mat, you can install a spacer in the rabbet of the frame to separate the glass from the mounted textile. Spacers can be constructed of acid-free mat board or one of the commercially available frame spacers made of polypropylene or polyethylene.

Frame & Hardware Choice

When choosing a frame, take into consideration the depth of the rabbet, which is the inside edge frame molding. Choose one deep enough to accommodate your mounted textile, mat boards or frame spacer, and glazing. Remember, there should be at least three-eighths inch (3/8") between the mounted textile and the glazing.

Make sure all hardware used to secure the mounted textile in the frame is rust resistant. If rust -resistant diamond points are not available, brass brackets and screws can be substituted. Mirror hangers are more secure than wires. However, if you are using a wire, be sure to employ two hangers, not one. This will keep your framed textile straight and offer extra security.

Conclusion

This conservation tip sheet offers information to think about when framing a mounted flat textile.

To mount a flat textile, please review conservation tips "*Is Your Textile Suitable for Framing*" and "*Mounting Flat Needlework Textiles on a Fabric Covered Board for Framing*."

If you have questions, contact the Conservation Outreach Program at the Minnesota Historical Society for advice. Program staff can be reached by phone at 651-297-1867, 1-800-657-3773, FAX at 651-296-9961 or e-mail at conservationhelp@mnhs.org.

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Glossary

Glossary terms provided
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Acid-free: A popular and loosely applied term referring to matting, framing, and storage materials having at the time of their manufacture a neutral pH; sometimes used inaccurately as a synonym for alkaline or buffered.

Alkaline: Characterized by having a pH of more than 7.0

Alkaline reserve: The amount of alkaline precipitates which forms in deacidified paper upon exposure to air. A reserve of two to three percent of precipitates is considered a reasonable level for permanence. 2. In accordance with ANSI Z39.48-1984, the compound, typically calcium carbonate, in mat board and other paper-based storage materials, deliberately introduced in order to impede acid degradation, by acting as a buffer to maintain a pH greater than 7.0. A 3% reserve is generally recommended.

Archival: (Archivally Sound) A non-technical qualitative term that describes a material or product that is permanent, durable, or chemically stable, and can there fore be safely used for preservation purposes; more accurately describes documents or records deemed significant and worthy of preservation.

Backboard: (Back Mat or Bottom Mat) The mat in direct contact with the verso (back) of the artwork and to which the artwork is typically attached.

Backing Board: The stiff foam board, corrugated paper or plastic board inserted into the frame to protect its contents from physical and atmospheric damage.

Buffering agent: (Buffer) In chemistry, a solution or material which contains both a weak acid and its conjugate weak base such that the addition of other acid or alkali causes only slight changes in the pH; also, the alkaline reserve contained in paper based materials in order to counteract acids that may form in the future.

Cockling: (Waving, Buckling, Warping, Curling, Undulation, Gondolage) Localized deformation or a repeating and regular pattern of deformation in paper, usually across the sheet or around the edges due to irregular drying or

fluctuating relative humidity. Cockling is sometimes considered to be more closely and regularly spaced than buckling.

Glazing: The glass or acrylic sheet used in a frame as a protective interface between the environment and the work of art.

Japanese tissue: (Japanese Paper) Hand- or machine-made bast fiber paper, typically made in Japan, used in conservation because of its strength, suppleness, and stability; in printmaking because of its softness, absorbency, and dimensional stability. It is often erroneously called "rice paper" or "mulberry paper."

Methyl cellulose: A chemically modified cellulose ether which has many used in conservation as an adhesive, poultice, and sizingagent.

Polyethylene: A translucent thermoplastic material prepared by polymerizing ethylene at high pressure and temperature in the presence of oxygen. In sheet form it is used for lamination of documents in lieu of cellulose acetate or for encapsulation. It can also be used as a hot-melt adhesive or made into foams.

Polypropylene: A stiff, heat-resistant, chemically stable plastic. Common uses include storage enclosures.

Sizing: (Size) A substance that inhibits the penetration of water into the internal structure of paper and therefore decreases the swelling of the paper fibers in response to moisture. Sizing affects the stiffness, strength, smoothness, and weight of the paper, as well as its aging characteristics. Sizing agents include rosin, gelatin, animal and synthetic glues, starch, cellulose ethers, synthetic resins. 2. Chemicals added to paper and board that make it less absorbent so that inks applied will not bleed. Acidic sizing can be harmful and can cause paper to deteriorate.

Verso: (Reverse) The back or opposite side of a sheet on which appears an image or printed text, usually characterized by having no image or printed text or one deemed to be of lesser importance. Also called the reverse. The left hand side of an open Western codex.