



CCAHA specializes in the treatment of art and historic artifacts on paper and provides preservation education, training, and consultation. Established in 1977, CCAHA is the largest nonprofit conservation lab in the country.

## MATTING AND FRAMING SPECIFICATIONS FOR OBJECTS ON PAPER

Choosing appropriate materials and methods for matting and framing paper artifacts has a lasting and significant effect on the condition of the artifact. Properly made mats can protect and aesthetically enhance an artifact for many years. Poor quality materials or designs that do not adequately support and protect the artifact can create disfiguring stains and distortions or negatively affect the media. These recommendations are intended to provide specific guidance in selecting materials and methods so the considerable expense and effort of matting and framing is the best investment possible.

### **Mat board**

Mat boards should be chemically stable, made from 100% cotton rag or purified wood pulp, free of lignin, ground wood, and metallic particles. Mat board used with photographs should pass the Photographic Activity Test (PAT), a predictive test of reactions between the mat board and the photograph (including inkjet prints). In most cases, select alkaline mat boards that are buffered with 3.5% calcium carbonate to protect against acid migration and oxidation over time. Some photographic processes, such as cyanotypes, are sensitive to alkaline environments and should be matted with neutral pH mat board. Research continues on this topic.

CCAHA uses mat board that contains zeolites, molecular sieves that absorb gaseous pollutants. This patented additive is in interleaving paper and storage enclosures called MicroChamber and in mat board called Neilson Bainbridge ArtCare.

At CCAHA, neutral off-white shades of mat board are generally used for aesthetic reasons and because of the risk of colored mat boards bleeding in the event of contact with water.

Most paper artifacts that are generally in plane should be matted with 8-ply or 4-ply boards, which offer sufficient support behind the artifact and provide enough space between the artifact and the glazing. Some artifacts with planar distortions, thickly applied media, or that are very large require more depth between the surface of the artifact and the glazing. This can be achieved with acrylic spacers wrapped with alkaline paper, or ragboard.

### **Hinges or corners**

The artifact should be attached to the back mat board with mulberry paper hinges and wheat starch paste at the top corners or non-adhesive paper or polyester film corners.

At CCAHA, most mat attachments are done with mulberry paper hinges. Mulberry paper is long-fibered and strong, yet thin, with no additives that cause discoloration in the artifact. Wheat starch paste is a reversible, non-staining adhesive. The hinge should be attached to the artifact verso, dried under light weight to prevent distortion, and then attached to the back mat. As a general rule, hinges should be attached to the artifact five inches apart. The hinged artifact should be capable of free movement at the hinges and should not be adhered directly to the mat board at all.

Some artifacts do not have margins that can be covered by a window mat, or for aesthetic reasons a decision is made to show the edges of the paper in the mat. This is called a float mat, and requires a different kind of hinging that is not seen beyond the edges of the artifact. V-hinges are used in such instances: a V-shaped piece of mulberry paper adhered to the verso of the artifact and the back mat. The look of a float mat is sometimes preferred with modern art and can often be used safely, however large or heavy artifacts may require the support of a window mat to be supported securely.

### **Rigid support**

A rigid alkaline corrugated paperboard or ragboard should be placed behind the window mat for additional support. Do not use acidic corrugated paperboard, wood, or fiberboard.

### **Glazing**

Glazing is recommended for all artifacts on paper to protect the artifact from dirt and pollutants. CCAHA recommends acrylic glazing for most framing. Ultraviolet filtering eliminates a high percentage of ultraviolet rays from contact with the artifact. Though ultraviolet light is the most damaging part of the spectrum, care should still be taken to protect artifacts on paper from other light exposure.

A product called Optium Museum Acrylic made by Tru Vue combines anti-reflective and anti-static properties with ultraviolet filtering and can be used with pastels and other friable media that previously required glass.

### **Sealed package**

Most exhibition housing at CCAHA includes Marvelseal, a laminate material of foil, nylon, and polyethylene. The Marvelseal is placed behind the rigid support, wrapped around the edges and sealed to the glazing with Scotch Brand #415 tape and heat. The sealed package keeps out particulate matter and pollutants, and provides protection against rapid changes in temperature and relative humidity.

### **Frame**

The frame should be deep enough to accommodate the glazing, matted artifact, and backing board without extreme pressure. Period frames that are too shallow can often be amended by a skilled frame maker or frame conservator to have adequate depth.

## **Hanging hardware**

Many frames in home settings can be hung with coated picture wire attached to the side rails with screw eyes. Heavy frames may require D-rings on the side rails and two points of attachment to the wall. Museums generally use security hardware that requires special installation. Do not use saw-tooth hangers on the top rail.

## **Conclusion**

These specifications outline best practices for matting and framing a single artifact on paper. Some artifacts require special designs, such as diptychs or triptychs, double-sided artifacts, or artifacts on parchment. CCAHA Housing & Framing department staff are always available to discuss custom framing options.