

Mastering Mounting



by
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Burnishing Makes It Shine

So what do gold and mounting have in common? Besides being linked by a play on words (for this, the gilding issue), both gold and pressure-sensitive adhesives need to be burnished in order to shine. This month we'll look at pressure-sensitive adhesives, their application, and bonding longevity. When an adhesive holds well, it is money in your pocket; when it fails, it's a redo. Proper cold mounting methods for pressure-sensitives should be gold in the bank.

I've talked a great deal about digital images over the past few years and I have striven to explain identification methods for them as well as how to handle them—whether they are identifiable or not. A recent project of mine presented me with the opportunity to take you through the identification and handling of an unidentified image firsthand. What better way to help address these digital issues?

First Stage of Design: Definition

The customer brought in a matted, open edition image of three firemen hoisting the American flag at Ground Zero in New York City. Her father, a retired fireman, had purchased this piece while on recent holiday there during a ferry ride to the Statue of Liberty. He paid \$50 for the unframed, single matted piece.

The first stage of the design process is to define the art, so I needed to identify this artwork prior to any other design steps. Only then could the proper mat-



Photo 1: Inspection—The single matted image was loosely sleeved into a black, dusty paper mat that was glued on the left side. The top mat was held in place with a wad of ¼" masking tape at the lower right hand corner.

boards, rabbit lining, and mounting decisions be made. The single matted image was loosely sleeved into a dusty, black paper mat that was glued along the left side to a piece of acidic, 2-ply grey board. The mat was then held closed by a wad of ¼" masking tape at the lower right hand corner (see Photo 1). A framer's nightmare!

Stages 1, 2, 3 Merge

Stages two and three of design are creativity and analysis. This is when the actual design and limitations are acknowledged and considered. In this case, the creative aspects of the design were left to my professional discretion; the the limitations would include what mounting process could be used for this image. I felt sure this piece was a digital, but I needed to try to nail down what kind. My customer was unsure of any additional details, so she called her father to see what else he could supply. He

couldn't give us further information—other than that he had a great boat ride.

I removed the artwork from its mat folder and began the overview for the condition report. The surface of the image did not have a consistent gloss or sheen to it. The black areas were shinier than the white areas, which made me further lean towards the possibility that it was a duplicate from a copy machine. It was neither signed nor numbered, and it measured 11"x17", which is not a standard photo paper size (see Photo 2). It is, however, a standard four-color copy machine size.

At this point, I ruled out that the image was a traditional photo or thermal transfer because it was on paper and not photo paper. I began thinking it could be a toner copy, LED, laser, or inkjet. In my January 2002 article, "Everything Old Is New Again," I wrote that the process of photocopying uses electrical, chemical, or photographic techniques to copy previously printed and pictorial material (meaning existing documents, or in this case, art originals).

It was unlikely this was a scanned computer image that had been printed on an inkjet printer. As a photocopy, the original could have been any media from traditional photo to oil painting to manipulated photo, making this an image of either electrophotographic or electrostatic origin. Color electrophotography includes all basic four-color copiers, like those found in consumer stores like Office Max, Staples, and Kinko's. It was most likely an electrophotographic image.

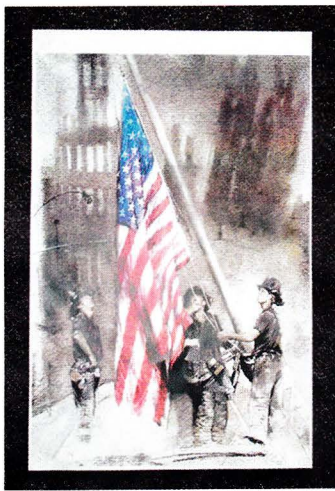


Photo 2: Sizing the Image—Upon measuring for the condition report, the piece measured 11x17". Though not a standard photo paper size, it is a standard 4-color copy machine size.



Photo 3: Cold Mounting Options—This brings the mounting options down to P-S or preservation techniques. Left to right are Nori prepared cooked starch; Art Saver P-S strips for the perimeter of the art; Linco and Neschen P-S acid-free hinging tapes; Dahle clear mounting corners; and ATG tape (upper right corner).

Or Is It Electrostatic Printing?

Since electrostatic printing is generally not used for fine art, I had not been leaning this direction. It is a copying process that uses static electricity (electrostatic) or the attractive force of electric charges to transfer the image to a charged plate or drum. Electrostatic graphics are defined by the fact that images must be printed on special dielectric media, which is usually paper. Since this paper felt like a

very common 20# to 24# lightweight copy paper, that also helped support the electrophotographic theory.

Mounting Options

Once I determined that the item was a toner copy, I then needed to choose a mounting process. Even though electrostatic images are not printed on an actual thermal paper, they do use a heat-set ink process, and these images are more sensitive to dry mounting than electrophotographic ones are. Any time the printing origin of the image is unknown, it is best to select a cold method of mounting. This project could be mounted using most any wet, spray, pressure-sensitive, or preservation technique.

Since electrophotographic images are water soluble and the papers are often thin, moisture control should be implemented. This tends to eliminate the options of wet and spray mounting. Actually, if the selected spray adhesive were a solvent-based (not water-based) aerosol, the digital would tolerate the moisture encountered. (See "Solvent and Removal Techniques," PFM April 2003.) Dry mounting was also not a good choice. These dry pigments are pressed to set under heated rollers during replication and the resulting gloss is often altered during heat mounting.

Acid-Free Hinging or Formal Preservation

So, the mounting options were narrowed down to either acid-free pressure sensitive tapes or preservation techniques (see Photo 3). Since use of waterborne mounting methods is not desired, and since

it had been decided this was a low cost copier replica, traditional Japanese hinges were ruled out. Corner pockets were a little too bulky for the weight of the 20# digital, so Lineco Hinging Tissue was chosen. The tissue is the closest thing to traditional cooked starch and torn tissue hinges without moisture, while still being a ready-to-use, acid-free, neutral pressure sensitive tape.

Burnishing the Hinges

Whether utilizing traditional rice paper hinges or pressure-sensitive ones, the same strip application applies. A pendent T-hinge was used so the tape would only come in contact with the back side of the top edge of the paper image. It was placed on the top $\frac{1}{8}$ " of the inner side; then a cross piece was applied horizontally across the face of the first tape. This means that if the image were to tear from its mounting, the tape, rather than the artwork, would be torn. A bone burnisher was used to activate the tape and maximize the bond between the tape and the 4-ply alphacellulose backing board (see Photo 4). Once the tape face was burnished, the hinged art was then turned to expose the verso side and that tape attachment was also burnished (see Photo 5).

Burnishing for Maximum Bond

A pressure-sensitive adhesive is a permanently tacky substance that bonds to an untreated surface at room temperature with only the application of slight pressure. By definition, these adhesives differ from every other category of adhesive. Pressure-sensitive adhesives

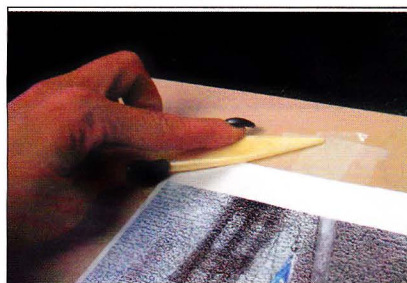


Photo 4: Bone Burnishing—A T-pendent hinge was placed on the top $\frac{1}{8}$ " of the inner side with a cross piece horizontally over the first tape. A bone burnisher was used to activate the tape and maximize the bond between the tape and the 4-ply Alphasag backing board.

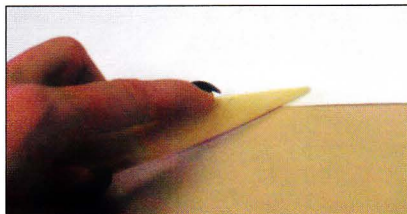


Photo 5: Burnishing the Verso Side—Once burnished on the face, the hinged art is turned to expose the back and that tape attachment is also burnished in place.

do not require any open time or solvent evaporation in preparation for bonding.

They have slightly lower bonds than heat-set dry mounting adhesives, but because of their permanent tack, they can be bonded to almost any surface with only thumb pressure. (Yet it needs to be noted that thumb pressure, without burnishing, will initially activate the adhesive but only to about 25% of its bonding potential.) Based on the theories of TTPM (time, temperature, pressure, moisture) any pressure-sensitive adhesive or tape must be properly burnished to activate; then that tape must be allowed to cure under a weight to create maximum bond. That is true for any pressure-sensitive material.

We have all applied a clear tape to paper or board and burnished it smooth with our thumb-nail to activate. You can see the



Photo 6: ATG Application—The tape crosses at the corners and runs the entire length of the window opening for maximum bonding potential. Also notice the $\frac{3}{16}$ " mat spacer has been cut as a full size sheet with a window opening to evenly support the mats all around.

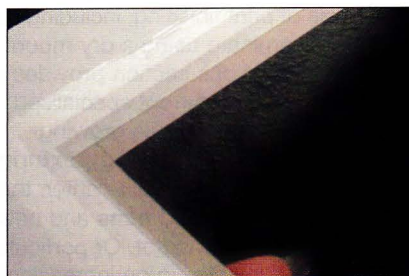


Photo 7: ATG Tape Rolled at Edges—The tape has not aligned evenly onto the mat because of inconsistent application pressure when applying it with the ATG gun.

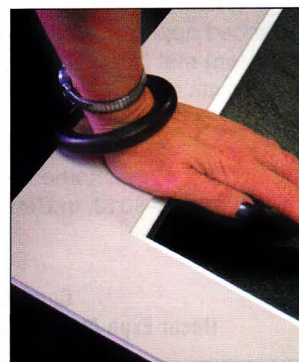


Photo 8: Pressed to Activate—When two mats are ATG taped together they are then aligned and pressed manually to attach and activate the tape to hold



Photo 9: Linen Hinge—A pressure-sensitive linen tape may be used as the side book hinge for the triple mat with spacer. This too must be burnished with a bone to ensure maximum bond.

tape clarify beneath the burnishing when that is done. It is visual proof that it has been activated. In Photo 6, lines of ATG tape have been applied to the verso side of the foam board spacer that has already been taped to the underside of what is to be the top mat. Notice the tape crosses at the corners and runs the entire length of the window opening for maximum bonding potential.

Though difficult to see with the naked eye and even tougher to photograph, there are tiny white air bubbles all along the applied tape, indicating a very light tack. In Photo 7, notice the tape has not aligned evenly onto the mat because of inconsistent application pressure from the gun. Though this foam spacer will no doubt hold decently for the life of the framed art, it will never be because



Photo 10: 3/16" Spacer Gap—When the completed mat package is closed and viewed from the front the 3/16" foam-board spacer holds the top mat off the middle mat for added intensity.

of well-activated nor cured tape application and weighting.

When two mats are ATG taped together they are aligned and pressed manually to attach and activate the tape to hold (see Photo 8). As mentioned above, this is most likely only activating about 25% of the potential ATG bond. Most of the time, these mats are then immediately placed into the frame and readied for final fitting



Photo 11: The newly matted image

without weighting at all.

If pressure-sensitive tapes are to be used, all mats should be sized within 1/8" of the outer mat in order to support the window mats and to help ensure inner mats will not release and fall down into the window opening. Then, if the tape bonds fail, the mats will not shift

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through gravity enough to be noticed. However, the more correct method of bonding would be white glue.

A stronger pressure-sensitive linen tape may be used as the side book hinge for the triple mat with spacer (see Photo 9). This too must be burnished with a bone to ensure maximum bond. Another

way to ensure lack of mat misalignment is to linen hinge the mat front to the backing at the bottom edge rather than the longest side. This is generally a personal choice, and as shown in Photo 9; I taped these on the longest side not the bottom. Pressure-sensitive tapes are also prone to cold creep or oozing of adhe-

sives over time. All of these may be great reasons to opt for corner pockets, edge strips, or cooked paste hinges.

Nearly Completed Project

Once all layers are completed and the mats assembled, it is ready for viewing and final fitting. When the completed mat package is closed and viewed from the front, the $\frac{3}{16}$ " foam board spacer holds the top mat off the middle mat for added intensity. This helps draw the viewer's eye into the art (see Photo 10).

Though the frame had not yet been placed on the project, the completed mat unit with spacer nicely showcases this digital image. Though the picture in this article may appear a little blue it really is not. The top mat perfectly matches the faces of the firemen, the middle cool blue based white mat pulls the eye into the flag, and the inner charcoal liner mat is identical to their fire hats (see Photo 11). ■

*For more on framing silk items, read these articles on the PFM website—
www.pictureframingmagazine.com:
"Mounting a Sheer Silk," by Diane Day, CPF, May 1996 and "Float Mounting Silk," by David Reed, December 1999.*

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