

Mastering Mounting

by Chris A. Paschke, CPF, GCF



Staying Up to Date

Now and then, it pays to take a look at how the world of mounting has changed, especially in an age of digitals, roller laminators, and mounting temperatures that run 130°F to 215°F. This is important because you need to make sure you know what a project really involves before you decide what techniques to use.

Oversized Mounting

When a 40"x60" wide-format image is to be mounted in a 40"x60" press on the same sized board, there's no room for trimming after mounting. There will be some degree of board compression at the edges after mounting. An image that large is best applied to at least a 1/2" foamboard or to a thinner, high-density board. But even with a thicker foam substrate, there will still be edge compression, possibly even more than with a thinner board as the rubber diaphragm contracts during vacuum suction.

By inserting 1/2" to 1" wide strips around the

full perimeter of the mount board—the same thickness of the substrate—the diaphragm compression will be absorbed by the disposable pieces and the edges of the actual mount

should remain crisp and blunt without trimming. When 3/16" foamboard is the only option because of rabbit depth limitations or budget restrictions, a compressed edge will most likely be hidden by a frame.

Permanent film laminates can be mounted to the surface of display images that readily serve as a



The surface finish (left) appears mottled or scuffed when the sponge is not used. A correctly mounted finish (right) reflects the texture of the sponge.

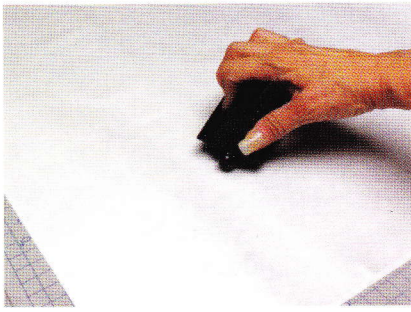
washable, scratch resistant, non-breakable glass substitute. If a mount will be displayed with vinyl lamination and no frame, a thicker, 1/2" foamboard or more rigid substrate, such as a honeycomb panel or aluminum composite material (ACM), would make a better choice.

Mount Then Laminate

It is common practice to mount a print or photo first, then laminate. All adhesives—including HA boards—and laminates have windows of activation temperature with about a 25°F activation span. Mounting temperatures lower or higher than manufacturer recommendations can result in inadequate activation or bond failure.

Vinyl laminates come in smooth finishes (matte, luster, satin, semi-gloss) and textures (linen, canvas, emery). All vinyl laminates should be perforated prior to bonding, with some sold as pre-perforated rolls. The image is mounted, layered with the perforated film (allowing for air to escape), and then covered with a sponge overlay and proper release materials to protect the platen when bonding.

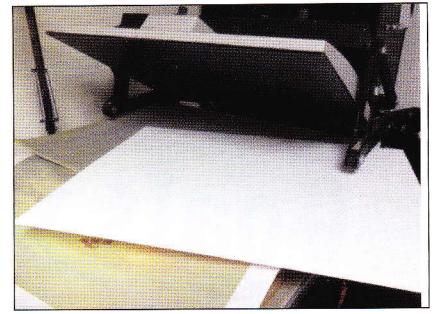
As materials and processes change, it's important to stay current to achieve the best results



Perforate the film from the top into the liner using the weight of the tool and cover so the holes are about 1/2" apart.



Cut the laminate larger than the poster, peel back the film, align the poster between laminate and liner, and close the vinyl film over the print.



The poster is laminated first in two bites with a sponge overlay and release board.

The 1/4" to 1/2" sponge is required when laminating for three reasons:

- to create even pressure to all the highs and lows of any textured laminate
- to slow the overall bonding time
- allow air to migrate to the edges and through perforation holes prior to bonding.

Laminates bond between 185°F and 215°F depending on the manufacturer. The vinyl gets soft when heated, so the surface picks up the texture of what it's in contact with while bonding, either sponge or release paper. If the sponge is forgotten or eliminated, the film may not bond properly and the surface may appear mottled or scuffed. A smooth-finish laminate bonded to manufacturer specifications will reflect the texture of the sponge as its finish.

Material Selection

Since laminates bond at higher temperatures and 130°F to 150°F HA bonding temperatures are becoming common, there are occasions when mounting first and then laminating may not be an option. Say a poster is mounted at 130°F to 160°F then laminated at 215°F. In that case, the increased press temperature could impact the initial low-temperature mount. Or the entire board could be compressed, reducing a 3/16" foamboard sheet to a 1/8"

throughout. A removable adhesive could also be weakened since the bond temperature would be outside the recommended range.

Remember that when an image is mounted to a removable board, it always reactivates when placed back under heat in a press, bonding only as it cools. So a removable 160°F HA board will soften and could potentially release from the bond when subjected to higher laminate temperatures.

A recent project called for mounting and laminating a 1970s open-edition lithograph with surface abrasions, moisture damage, and ripples. A canvas-texture laminate was used for the makeover to best camouflage the damage and protect the image without glass. Canvas Finish Guard is a 5 mil textured vinyl film that bonds at 215°F with a window of 200°F to 225°F. Artshield Canvastex UV is 10 mils thick with an embossed canvas finish that bonds at 195°F with a window of 185°F to 210°F. Both are backed with low-tack adhesive for alignment and a release liner.

Resources

<http://dkgroup.com>
<http://drytac.com>
<http://gilmanbrothers.com>
<http://kooltack.com>
<http://graphicdisplayusa.com/en/>

Items

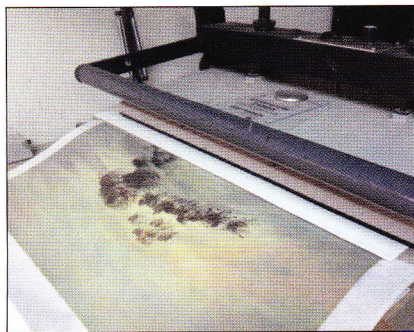
Finish Guard, laminate supplies
 Art Shield, laminate supplies
 MountCor HA, Ryno, Eaglecell honeycomb
 Competition Plate (aluminum composite), HA boards
 Fome-Cor, Gatorfoam, Dibond,

Laminate Then Mount

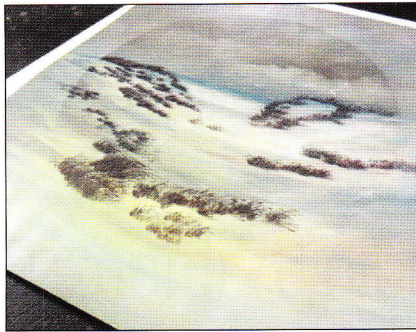
Using a 210M-X mechanical press, the 22"x28" project would be mounted in two bites, so a permanent adhesive was required as well as a release board. Any removable adhesive will reactivate when put back in the press for subsequent bites and air tunnels can result. The use of a release board rather than release paper prevents dents and damage by dissipating the pressure at the bite point. The solution was simple—lamine and then mount.

Step-by-Step

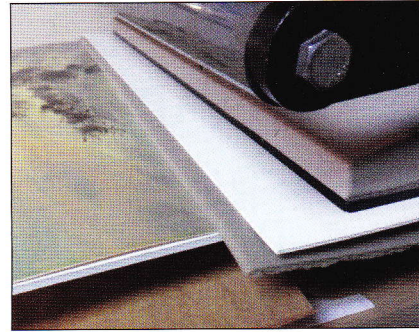
- Perforate the film from the top into the liner using the weight of the tool and cover so the holes are about 1/2" apart.
- Cut the laminate larger than the poster, peel back the film, align the poster between laminate and liner, and close film over print.
- The poster is laminated first—with no substrate—at 215°F in two bites using 1/4" sponge overlay and release board.
- The film, print, and liner package is trimmed to the poster edges allowing the liner and excess film to fall away.



Line up all layers squarely and clamp the lid into locked position five minutes for each bite. There is no substrate beneath the poster to lift it flat during bonding of the laminate.



Size the HA foamboard to the exact size of the laminated poster for mounting. Align and tack in place.



Stack the substrate, tacked poster, sponge overlay, and release board for each bite. In this case, the substrate holds the print flat.

- The substrate is trimmed to the same 22x28" while the press cools down to 130°F.
- Align the substrate to the laminated poster and tack in place prior to mounting. Clamp in press to bond.
- Overlap each subsequent bite the maximum amount to prevent air tunnels or unmounted portions.

Laminate textures can definitely help cover minor paper damage, but visible creases, broken fibers, and rubbed ink cannot be covered. The completed laminated then mounted lithograph was placed back into the original gold metal frame as requested.

It's a bad idea to try to mount a laminated print to a cooler temperature HA board at the same laminate temperature by using simply shortening dwell time. That lacks the proper mounting control over the end product. With the addition of the required release board when multiple biting, all layers must reach bonding temperature; it's very difficult to determine the dwell time. Mounting at manufacturer-suggested temperatures is best.

Temperature or Something Else?

Framers and photographers often call with problems or questions. My response always goes back to the basics, with the elements of Time,

Temperature, Pressure, and Moisture. How long was it in the press? What temperature was used? What type of press was used, and was it adjusted for the proper pressure? Did it need pre-drying prior to mounting? Sometimes it's a matter of really knowing what you have to mount in the first place and then what is actually going on if there is a resulting bond failure.

For example, a photo with a finish coat applied from the printer was mounted to a low temperature HA board, though it was not known if the finish would have a reaction to heat. After asking what seemed to be all of the correct questions, both the customer and the printer gave permission for the framer to proceed with the mounting. The prints mounted fine but there was a blotchiness to the coating, and it seemed the coating was separating. Framers most often blame the product rather than think about poor technique or misuse.

To best determine what might really be happening, the question was what products were used. A wide-format, eco-solvent inkjet printer was used to print the photos onto an opaque white-vinyl, matte, digital film medium designed for exterior signage using eco-solvent inks. The selected film had a permanent pressure-sensitive adhesive applied to the back. After printing, it was coated with

a 3-mil permanent, clear, pressure-sensitive, vinyl overlaminate film.

Since the media had a P-S on the back and the overlaminate was also applied as a P-S, the project should have been mounted using cold roller laminator to a high density, rigid substrate—not in a heat press to any HA board—regardless of mounting temperature. A vinyl laminate in a heat press requires a sponge overlay to prevent the vinyl surface from reacting to the silicone-coated release liners. If there was surface blotching, it was most likely due to the lack of a sponge.

What seems to have happened was that the pressure-sensitive layer and the heat-activated adhesive were not compatible, and the failure resulted when more than one mounting process was being attempted. A successful result would mean beginning anew with another image and use either P-S or HA materials, but not both.

Do Nothing

This is a perfect example of needing to know all the facts prior to deciding how to proceed. All wide-format imagery is digital, but knowing that isn't enough. As a custom picture framer, you also need to know who printed it, how it was printed, on what printer, using what ink, on what media, and what—if anything—was used as a coating, before



The light reflection (upper right) shows the canvas texture of the laminated and mounted poster. Though laminate textures definitely help cover minor paper damage, visible creases and broken fibers cannot be covered.



The completed laminated and mounted image went back into the original gold metal frame and lived happily ever after.

doing anything else. The framer in this case really didn't do anything wrong. It was more that the printer didn't inform the customer of how the new photo should be handled—if it was to be displayed as framed art rather than exterior signage. It would be wonderful if printers today sent out info sheets with their printed images with a listing of products used in the creation of the image so issues like this might be prevented.

The point: ask all the questions needed to help you make the right decisions. You may opt to make the calls and research all the elements, but be sure to add a "digital charge" or at least something to offset the additional research time. It looks as though print-

ers, framers, and consumers must all work together to best determine the correct way to display fine art. If you still cannot fully identify all the elements involved in the production of a digital print, the best solution may be to do nothing. ■

Want to learn more about mounting? Chris will be leading in-depth mounting lectures and workshops at the National Conference this January in Las Vegas.

Chris A. Paschke, CPF, GCF, CMG, mounting editor, owns Designs Ink in Tehachapi, CA, featuring custom framing, fine art/graphic design, and consulting. Specializing in mounting, matting, design, and fine art, she teaches at The National Conference. She has written four books on mounting including *The Mounting and Laminating Handbook* (third edition) and *Creative Mounting, Wrapping, and Laminating*, available from PFM PubCo. She can be contacted via www.designsinkart.com.