

Mastering Mounting



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Laminating Basics: Porous Breathables

Mastering the techniques of mounting is only a portion of knowing how to efficiently utilize your heat mounting equipment. Last month's column "Golden Profits" illustrated that in order to receive maximum profits from your equipment, you need to know both mounting and laminating. So what exactly is laminating?

Types of Laminating

Laminating is a process of applying any durable clear pressure-sensitive (P-S), or heat-seal film to a flat surface for the purposes of protecting and enhancing the surface. Films may be acrylic, polypropylene, polyester, or vinyl. Choosing which film to use depends upon the equipment used; intended purpose for the lamination (indoor or outdoor); and whether it is to be cold laminated with liquid or pressure-sensitive laminates, roller machines, or heat set in a press.

The cold methods are generally not used in the framing industry but are quite prevalent in the digital and photo worlds. Often, when a photo company recommends laminating for items, they are referring to cold roller techniques.

In our industry, laminating is the heat application of a protective vinyl laminating film to the surface of paper art or photograph. It is non-reversible, washable, durable, permanent, lightweight, non-breakable, will not fingerprint, is non-porous, and has some UV protective properties.

Once you own a heat press, whether it's a hardbed, mechanical, or hot vacuum, laminating is a natural addition to your dry mounting services. No other equip-

ment is required and the only additional materials for heat-set surface-laminating include overlay foam, an optional perforator for laminating non-porous items, and the film itself. Films are available in assorted matte, gloss, and high gloss finishes, plus various canvas, linen, and emery textures.



Photo 1: UV Sampler—This 8x10" sampler remains unlaminated in the upper left, and is laminated on the lower right with matte film. The newsprint has yellowed over the years, but the laminated portion still looks better than the original unprotected corner.

Surface Laminating vs. Encapsulating

When only one side of a project is to be coated or covered with a protective film, it is known as *surface laminating*. Enclosing or sealing an item between two sheets of clear film is known as *encapsulation*.

There are conservation and non-conservation methods of encapsulation. The conservation method using Mylar-D is the

process designed to protect documents from destructive outside elements and is totally reversible, while laminating encapsulation with heat-seal polyester films is not.

Heat-set laminating encapsulation directly relates to permanently fusing laminating film, (whether vinyl or polyester), to both sides of a paper or document using heat-seal or cold P-S methods. Menus, ID cards, and catalog pages are often encapsulated with polyester on two sides to protect them from moisture and damage. When a customer calls you in reference to laminating, they are generally referring to this type of permanent encapsulation, not surface applications.

Lamination As A Glass Substitute

Polyester lamination and encapsulation has been around since the early 1960's, having been designed to both protect paper and make it look good. In the early 1980's, vinyl laminating film was developed for use specifically within the picture framing industry. This single-sided application of a laminate was developed as a glass substitute.

Vinyl films were developed specifically for use within a heat press rather than the polyesters used in commercial, home, or office roller laminators. They feature a removable release paper backing.

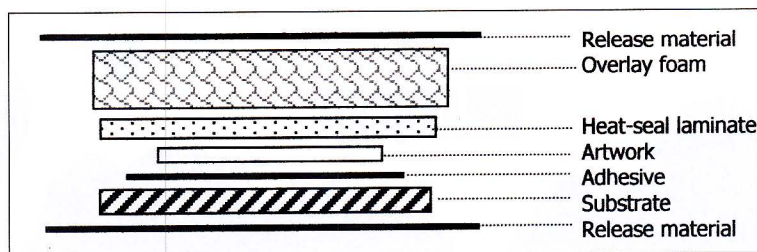
Its versatility allows for laminating to be promoted whenever the use of glass is not permitted. Unbreakable glazing means the

ability to offer framed art to nursing homes, hospitals, day care centers, preschools, a baby's room, pediatricians' offices, detention facilities, or anywhere glass is not desirable.

Other Logical Applications

The moisture-proof nature of vinyl materials means mounted and laminated pieces may be used in high humidity areas such as public swimming pools, bathrooms, kitchens, and boats. Washable vinyl surfaces also allow for laminates to protect signage or charts that require the use of erasure when written on with water-based felt pens.

Also, the soft plastic vinyl film is easy to penetrate which makes it good for use with push-pins on maps, real estate charts, or when perforating is required for laminating over non-breathables. The lightweight vinyl also cuts down on the overall weight of a framed piece for display, or when shipping charts, maps, and inexpensive artwork.



Though ultraviolet protection is not the top promotional aspect of laminating films, they do inhibit the UV rays from penetrating through the films to the artwork. This will help to reduce, or at least slow, the fading from natural sunlight, fluorescent, and tungsten bulbs. However, just as with tradi-

tional UV glazing, it cannot prevent all light damage.

A perfect sales aid to have on hand is an 8x10" sampler of newspaper mounted to a board, with only half of it covered with laminating film (see Photo 1). If this sample is left exposed to direct sun or placed under a UV grow light (often used for plants) for as little as a week, the laminated side will visibly illustrate the added protection with reduced yellowing.

Basic Technique

Laminating applications vary depending upon the manufacturer and the press selected. The heat-seal laminating film is a thin vinyl, which sets in a heat press at a temperature of between 190-225°F. The time required in the same press runs five to 10 minutes depending upon the brand of laminate, overall size of the project, and thickness of the substrate. Basic set-up and preparation for applying films remains fairly constant between manufacturers,

so learning the basics will follow through (see Diagram 1).

Anytime laminating films come near heat, the vinyls immediately begin reacting to the temperature by developing numerous little bubbles. *Do not*

attempt to peel up the film after it has begun to react to the heat. Most likely, it will cause ink to be removed, creating irreversible damage to the poster. It will contract and reflaten during the laminating process.

Preparation and Set-Up

Understanding the basic procedures

for proper laminating will eliminate most potential problems. Pay attention to maintaining a clean area while positioning all films. The static electricity created during removal of the liner can attract unwanted dirt and dust particles. A clean work area when laminating will create the same clean end product as when mounting.

Standard laminating requires two visits into the heat press—first to mount, second to laminate. As with dry mounting, any project may be placed back into the press for additional mounting time. But in order to add time, it must first heat the initial time plus the added time (original time + added time).

Once a poster has been mounted and the film cut to size, peel back the first few inches of the release paper to expose the tacky adhesive of the film for positioning on the poster (see Diagram 2, top). The larger the size of the print or poster, the wider the strip of film should be folded back.

Line up the bottom of the film with the edges of the poster making certain all adhesive is covered and the film is properly aligned. Slide your hand lightly across the surface of the film from bottom to top and press the tacky film into place. It is not necessary to rub or burnish the film, a light-feathered fingertip pressure is best. Reach under the film, grasp the release paper, and pull it towards the bottom end of the board (see Diagram 2, bottom).

Next, cover with overlay foam

and place in press for designated time and temperature. The foam is required to apply even pressure to the surface of the film, slow down the heat transfer, and allow air time to escape out the edge (see Photo 2).

Overlay Foam and Foam Plastic

There are three basic reasons to use overlay foam during lamination. First, it is designed to create even

pressure between the platen and the uneven surface of the films, particularly the textured linen and canvas finishes. Second, it slows down the heating time of the films so that, third, it can better allow for air to escape from the center of the project to the outer edges during bonding.

Do not substitute unfamiliar commercial foams for manufacturers' overlay foam. Some foam may adhere to the laminating films during the mounting process.

In our industry, standard overlay foam (a.k.a. foam plastic) is $\frac{1}{4}$ " thick; foam plastic is the term for the $\frac{1}{2}$ " thick foam for use in some vacuum presses. The commercial version is a yellow-white color and is used to slow the transfer

of heat from the platen to the adhesive. This allows the air and moisture the necessary additional time to be evacuated before bonding occurs. Using $\frac{1}{2}$ " foam plastic could eliminate the need for the two-step temperature process of laminating in vacuum presses with rubber impregnated diaphragms that draw quicker vacuums.

Techniques and Warnings Repositioning

When initially applied to the poster art prior to mounting, laminating films are repositionable. This means once the release paper is removed from the back of the film and the film is laid onto the poster, it may still be lifted partially, or totally, from the poster and repositioned. But if it is left in position on the

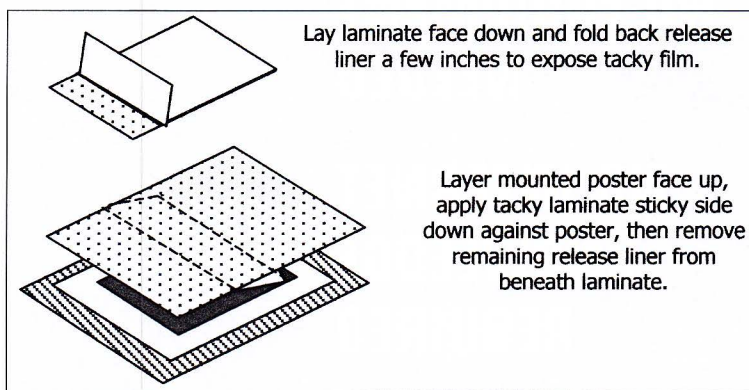


Diagram 2: Once the piece to be laminated has been mounted, you can peel back a section of the release paper in preparing to adhere it to the piece. Next, the tacky laminate is applied with a feather light touch.



Photo 2: Overlay foam (a.k.a. foam plastic) must always be used when laminating. Many films will react with the silicone of the release materials as seen in the center.



Photo 3: Some of the surface ink remained as ghosted white ink on the adhesive side of the laminate when peeled up for repositioning after 15 minutes of contact.

surface of a poster unmounted for any length of time, (this might be as short as 15 minutes depending on the heat and humidity in the workroom), peeling the film sheet from the face of the poster may lift off some of the ink (see Photo 3).

Sizing

When sizing laminates, all adhesive

must be covered by the vinyl film. Adhesives should be sized larger than the print being mounted, yet smaller than the substrate. The laminate, in turn, needs to be larger than the edges of the adhesive and smaller than the substrate.

When sizing tissues and films for mounting, it is most efficient to mount them in the center of a

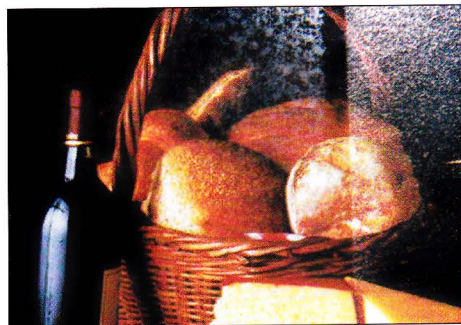


Photo 4: Forgotten Foam—The central top area of this image shows the scuffed laminate which is the result of forgetting overlay foam in the laminating package. The far right section is correctly laminated with foam.

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slightly oversized substrate which allows for less time wasted during the preparation, alignment, and execution. Also if foam board is to be used as the substrate, there will be no crushed or compressed edges once the poster art or photo has been trimmed to size. After both mounting and laminating are complete, trim the board to exact size for framing.

Foam

Using damaged overlay foam or not covering the entire project completely will result in an uneven surface appearance (see Photo 4). If all of the adhesive is not covered by the film, the overlay foam will adhere to the adhesive when mounted. This will not cause damage to the poster since the foam residue will be stuck to the exposed adhesive on the exterior edge meant to be trimmed away.

However, the foam will be damaged and unusable for another project of the same size. As with release paper, any defects, dents, or divots in the foam may be texturally transferred to the film during the next project and appear as a line or dot of a different texture. The foam can be cut down into smaller pieces for smaller projects.

Selling and Samplers

As mentioned earlier, use of small 8x10" samplers are excellent aids when selling any technique that is new to a customer. Laminates, particularly ones with textured matte finishes, can help to cover damaged, wrinkled, or torn images. Yet, as good a solution as this may be, it will not and cannot mend broken paper fibers. It will only help to flatten and cover them.

You can use a wrinkled poster or heavily creased road map divided into three sections to show various results. Make one-third mounted only, another third mounted and laminated with your best textural laminate for camouflage, and the last third unmounted and unlaminated (see Photo 5).

Another "must" sampler to have is one showing the different finishes and textures of laminates .



Photo 5: Use a wrinkled poster or map to illustrate the effects of laminating. Here, the left panel is mounted/no laminate, the center panel is mounted/laminated with matte linen, and the right panel is unmounted/unlaminated.

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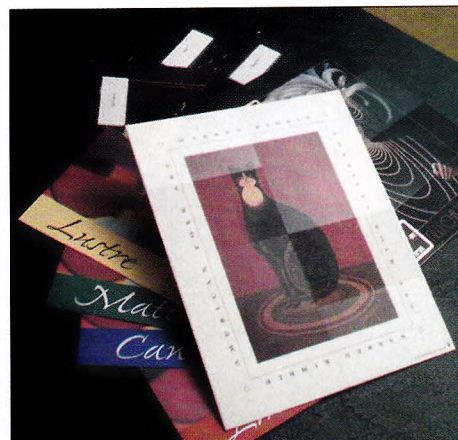


Photo 6: Film Finishes and Textures Sampler—The cat sampler is divided into sections using eight different films.

You can use one image and divide it into four, six, or eight to showcase the films and their effect over the same image. Black or dark rather simple prints are the best to use to actually see the film (see Photo 6).

Know What You Are Handling

Understanding laminates will take the fear out of using them. Still, you must remain cautious about what is safe to heat laminate and what is not. The pigment on toner color copies, for example, has been known to react to laminate adhesives by releasing the toner so that it recluses. Also, some digital images are heat-sensitive which makes them unsuitable for heat laminating.

The bottom line is to know



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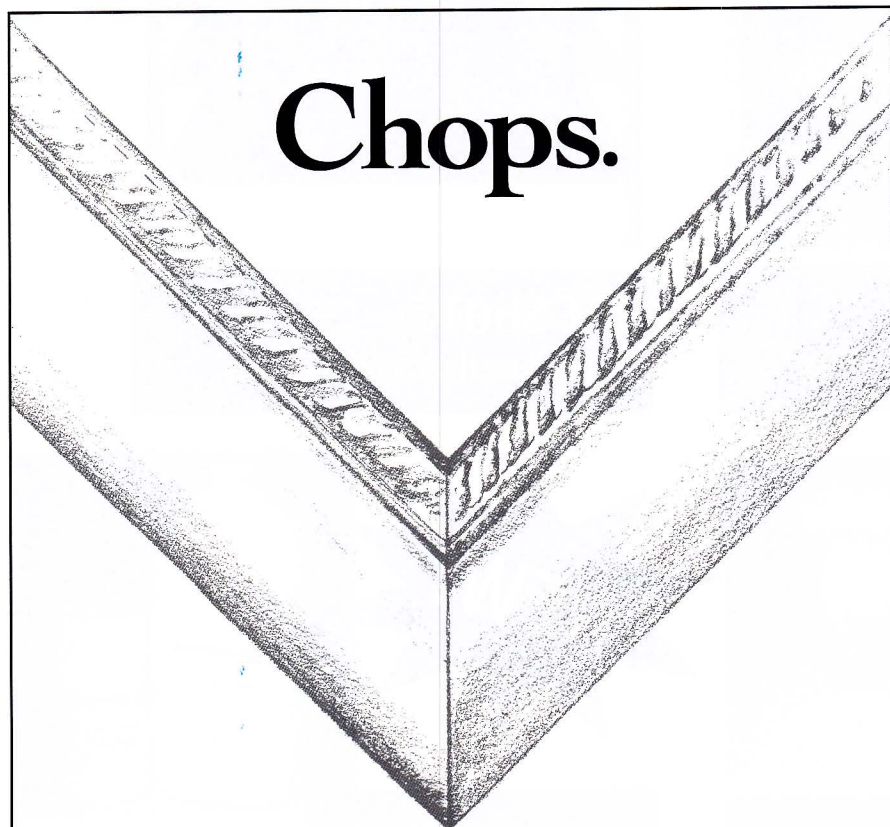
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what you are handling prior to subjecting it to the permanence of vinyl heat laminating. Then again, those open edition items may very well be candidates for laminating after all.

All of the discussion and basic concepts about laminating found in this article have been directed toward breathable porous images. Paper used to fall in that category, but today many coated papers are used in office printers and magazines, making them non-porous.

Though non-porous laminates may be used on these non-porous layers, they require additional preparation or modified mounting methods. Next month the topic will be "Laminating Non-Breathables," where a comparison of techniques and handling of coated papers and photographs when laminating will be covered. ■



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