Laminates As A Glass Substitute

by Chris A. Paschke, CPF

In the picture framing industry, laminating is the heat application of a protective vinyl film to the surface of paper art or photographs as a glazing substitute. It is a nonreversible alternative to glass which won't show fingerprints and is washable, durable, permanent, lightweight, nonbreakable, nonporous, and has some UV protective properties.

Once you own a heat press, whether hardbed, mechanical or hot vacuum, laminating is a natural addition to your dry mounting services. No additional equipment is required and the only additional materials for heat-set surface-laminating include overlay foam, an optional perforator for laminating nonporous items, and the film itself.

Why A Glass Substitute?

Versatility allows for laminating to be promoted when 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 less desirable due to safety.

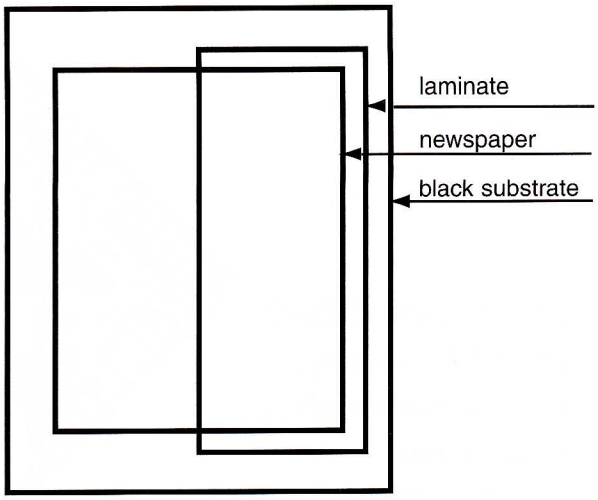
Other Surface Laminating Benefits

There are numerous other advantages to vinyl laminates. The moisture-proof nature of vinyl materials also means they may be used for framing that will be placed 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 will be written on with water-based felt pens.

The soft plastic vinyl film is easy to penetrate for use with push-pins on maps, real estate charts or when perforating is required for laminating over nonbreathables.

The lightweight vinyl also cuts down on the overall weight of a framed piece for display or shipping of charts, maps and inexpensive artwork.

Ultraviolet protection is not the top promotional aspect of laminating films, but these films do inhibit UV rays from penetrating through the films to the artwork. This will help reduce or, at least, slow fading from natural sunlight, fluorescent and tungsten bulbs. (Though just as with traditional UV glazing, it cannot prevent all light damage.) A perfect sales aid is an 8" x 10" sample of newspaper mounted to a board, covering only half with laminating film. If this sample is left exposed to direct sun or placed under a UV grow light for as little as a week, the laminated side will visibly illustrate the added protection by reduced yellowing (See diagram).



Newspaper 8" x 10" laminated sample.
Mount a newspaper article or clipping properly with clear film adhesive (wet, spray or pressure-sensitive is also fine) onto a black substrate to prevent ghosting. Mount clear matte, luster or gloss nontextured laminate heat-seal film to the surface of right half. Allow the sun or light to yellow it to illustrate the added UV protection of the films.

Cost Comparison

The price of laminating was never designed to be less expensive than glass. It was originally designed merely as the solution to the problem of what to use when glass was not permitted or desired.

You may use the same price chart you currently use for calculating retail mounting charges. Films run slightly higher than mounting tissues but when calculations are made for mounting charges they include mounting tissue and substrate as hard cost materials. Laminating costs only include the film itself, easily covering the cost of goods.

Vinyl Films for Surface Laminating

Vinyl laminating film was developed for use specifically within the picture framing industry. Surface- or overlamination may be achieved in heat presses with tissue adhesives or with a roller laminator using high tack pressure-sensitive adhesives designed specifically for the purpose.

Vinyls feature a removable release paper liner and are repositionable when initially applied to the poster, art, or photo prior to mounting. If, however, left in position unmounted for any length of time, peeling the film sheet from the face of the poster could lift some of the ink with it. Align, peel into position and mount right away rather than waiting.

Films for overlaminating come in an assortment of finishes and textures available from many manufacturers, and all but one are made of vinyl materials. There are high-gloss finishes made of polyester in which the technical mounting procedure varies slightly due to the variation in material composition.

Perforation For Use With Photos

Their ability to be perforated allows vinyl films to be used with nonporous photographic emulsions without trapping air. Because of lower mounting temperatures (180°F to 225°F) than comparable polyester films (230°F to 275°F), they may be used with foam boards also.

A perforator is a metal roller with five wheels of very sharp, precision-set teeth designed to punch tiny air holes through the surface of the vinyl sheet and liner prior to aligning them onto the mounted project. (See PFM, October 1994, "Laminating Photographs and Other Nonbreathables"). The holes allow the air to be forced from between the two nonporous surfaces during mounting, and will melt closed, becoming invisible.

Overlay Foams

All vinyl films require the use of overlay foam to ensure proper adhesion and desired texture during mounting. The foam also assists in allowing for better air dispersal from the face to the edges of the laminate during mounting.

Color and thickness of the foam does not alter its effectiveness, but the petroleum and/or rubber content in retail purchased foams from other industries might fuse to the vinyl during heat application. Only use manufacturer-approved foams with surface laminating vinyls.

Laminating Encapsulation

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

There are both conservation and

VINYL LAMINATES

- Designed for framing market heat presses
- Have a release paper liner
- Tacky and repositionable prior to mounting
- Require overlay foam
- May be perforated for nonporous items
- Mount at temperatures between 185°F to 225°F
- Sold in one thickness only
- Available in assorted matte, gloss and high gloss finishes and various canvas, linen and emory textures

POLYESTER LAMINATES

- Designed for commercial roller laminator machines
- Have no release paper liner
- Non-tacky and slippery to handle
- Do not require overlay foam
- Cannot be perforated for use over nonporous items
- Mount at high temperatures of 230°F to 275°F
- Sold in 1.5, 2, 5, 10 and 15 mil thicknesses
- Available in numerous finishes matte, satin matte, gloss and hi-gloss finishes and includes canvas, linen, emory, sand, crush, and leather textures

nonconservation methods are found in encapsulation. The conservation method of encapsulation is a refined process designed to protect documents from outside elements and often involves the use of two nonadhesived sheets of 3.5 mil polyethylene polyester film or mylar with acid-free tape to basically seal only the edges of the item from the elements therefore retarding deterioration. The conservation approach is totally reversible; laminating encapsulation is not.

Menus, ID cards, catalogue pages and similar items are nonconservation encapsulated on both sides to protect them from moisture and damage. The sealing polyesters have HA (heat activated) adhesive which permanently bonds to the project surface.

Polyester Films For Encapsulation

Polyester films, used dominantly for encapsulation, come in a variety of mil thicknesses and were originally developed for the protection of paper rather than to make paper look good. The 1.5 mil film differs in composition from the 2, 5, 10 and 15 mil thicknesses in adhesive, application and designated use.

The thinner 1.5 mil polyester is the more inexpensive, economical grade of film designed to be used most specifically with paper and ink. This low density polyethylene adhesive requires a relatively high mounting temperature of 230°F to 275°F. Since the current adhesive will not fuse to photographic emulsion it is restricted to use on nonphotographic papers only. It can be written on, is water repellent, durable and comes in gloss and matte finishes. Polyester and polyethylene films cannot be perforated for use over nonporous items because the film will not heal in the press during mounting like vinyl films will.

The thicker films (2, 5, 10, 20 mil) are considered a more commercial grade designed for use with photographs, toner copiers and other special applications. The adhesive is a modified copolymer which sets at a lower mounting temperature of 220°F to 240°F, and is considered more "photo friendly." The thicker films work well for free standing displays, placemats, ID cards, menus and other two-sided encapsulation needs.

Polyester films have an adhesive side which is best identified by its dull appearance, are not tacky to the touch, and do not have a release paper liner like vinyl films. Polyester encapsulation within a heat press is not advised.

Roller Laminators

Commercial encapsulation involves the use of the above nonporous polyester films. Since they do not breathe, they were originally designated for use with roller laminators which squeeze the air from between the layers as heated rollers apply pressure and fuse the film sheets together at the same time.

Small office laminators use polyester pouches and were dominantly developed for specialized use within schools, libraries, print shops, graphics and reprographics houses. Large scale encapsulation operations require purchase of a commercial roller machine and are often found in high volume production houses, advertising agencies and photo labs.

The Bottom Line

So what does laminating mean in the real world of the picture framer? Surface laminating with vinyl films is the solution to the objection: "I'd love to frame it for my son's room, but I don't want glass in there." What better reason for offering a logical alternative.

Two-sided encapsulation with polyester films may be an untapped market worth looking into, but new equipment may have to be purchased to make it time- and money-efficient.

Your job is simply to know the difference, understand the alternatives and make the choices. ■

Chris A. Paschke, CPF, owns Designs Ink, Oxford, CT, featuring commercial and retail custom framing, product consultation, design and education. Specializing in mounting, matting and design creativity she works with numerous industry leaders including Bienfang, Crescent Cardboard, Fletcher-Terry, Larson-Juhl, PFM, PPFA, and Seal Products. Watch for her new book, The Mounting and Laminating Handbook, *scheduled for release this summer.*