



# Laminating Photographs And Other Non-breathables

by Chris A. Paschke, CPF

Surface laminating is the heat application of a protective vinyl laminating film to the surface of paper art or photograph as a glazing substitute. It is a non-reversible alternative to glass which is washable, durable, permanent, light-weight, non-breakable, resistant to fingerprints, UV inhibiting, and—most importantly for this discussion—non-breathable. Films come in an assortment of finishes and textures; all but one are made of vinyl materials. (There is a high gloss finish made of polyester in which the technical mounting procedure varies slightly due to the variation in material composition.)

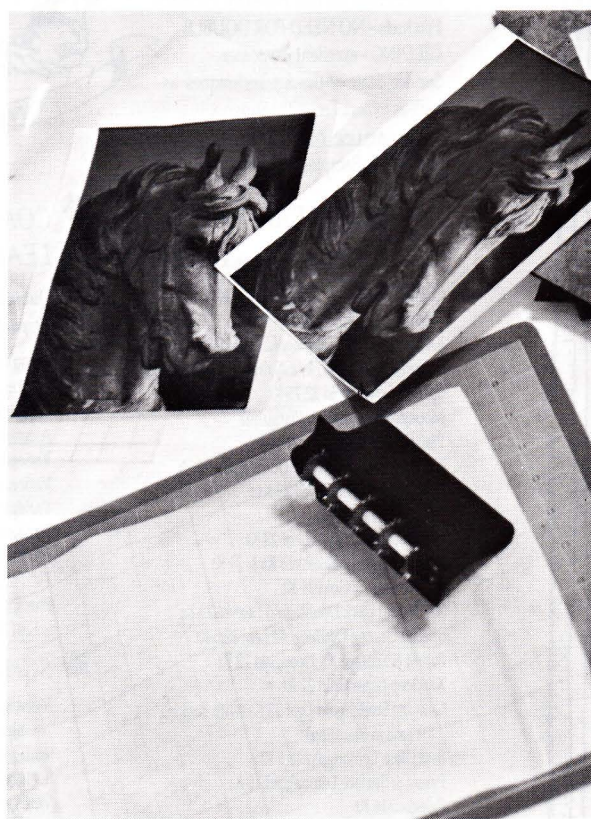
All vinyl films require an overlay foam to be placed on top of the film during the mounting process. This is what creates some of the pattern and/or finish of the particular film (see “Resurfacing/Retexturing Films”, PFM April 1994).

The lamination of breathable paper art is a simple process. Layer the vinyl laminating film and overlay foam on top of a mounted print, between release materials. Place in a heat press for a matter of minutes. The poster or print, when removed from the press, is beautifully mounted and laminated, ready for fitting. Breathable materials beneath a non-breathable laminating film still allow for air to be forced through the paper mounting toward the bottom, away from the film.

## Perforating

The procedure for laminating photographs differs from that for laminating prints only in that a resin-coated photograph is non-breathable, making it more difficult to remove all of the air from between the laminating film and the photo. In some cases, paper art or posters with heavy non-porous inks will also fall into this category. The solution in either case is to begin with a perforated film.

Photo 1: The heavy perforating tool may be used to manually punch tiny holes into the film for air to escape through during laminating.



Laminating films can be either vinyl or polyester. Only vinyl films may be perforated, since they will mend with the addition of heat during the mounting process. Films may be purchased pre-perforated in both pre-cut sheets and rolls, depending upon the manufacturer, or you may invest in a hand held perforator which allows you to perforate your films manually. (photo 1)

Manual perforation must be done on the face of the film to prevent any release paper fuzz from being forced into the film. The base weight of the perforator tool is adequate to make large enough holes for the air to escape while small enough to easily re-seal during mounting. (photo 2)

The trick of perforation is to allow all of the air between the two surfaces to be forced out through the holes prior to fusion during the mounting process. (photo 3)

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## Mechanical

For greater clarity in this article I will concentrate on one film, Seal PrintGuard-UV, in order to best explain the differences between mounting procedures, temperature adjustments and time variations when working with photographs.

The temperature setting for mechanical dry mount (also called soft bed) presses will be 185°F-225°F, depending upon the manufacturer. Refer to each individual manufacturer's mounting specifications for your press to modify photo laminating with perforated films.

Since mechanical presses establish maximum pressure (two to four psi) as soon as the arm is clamped closed, excess air is immediately compressed from between the non-breathable photo and film through the holes; the fusion process has begun. Within five to seven minutes, the completed lamination emerges with air holes re-sealed. A smooth laminated photo is now ready for fitting.

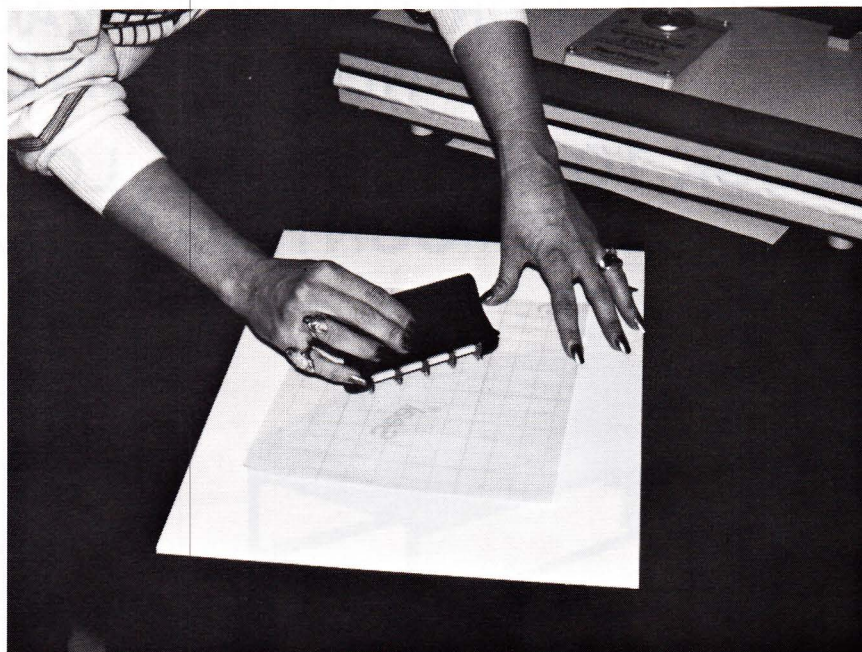


Photo 2: Always work with the surface of the film on a mat scrap or self-healing mat. Holes should be about 1/4" apart.

## Vacuum Presses

Because of the operating differences between mechanical and vacuum presses, the time and temperature settings will be directly affected by the type of press used during this procedure.

The major difference with this press is the time (approximately 45 seconds), it takes to pull the vacuum for maximum pressure (12 to 14psi) for mounting. If a perforated film/photo package was placed into the press at the standard laminating temperature of 215°F-225°F, the film could begin to permanently set prior to the vacuum having been pulled. This could result in trapped air between the perforations. The film could also set prior to the re-sealing of the holes, leaving visible pin pricks in the end product.

The simple solution: begin at a lower temperature (180°F), turn on the press, turn up the temperature (220°F) and extend the total time the package remains within the vacuum press (10 to 15 minutes). Although this is a slower process than laminating a breathable in a vacuum system or a mechanical press, it is much more foolproof.

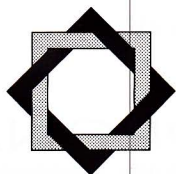
The theory is simple. While the vacuum press temperature is pulling up from 185°F to 220°F, the vacuum is pulled and the air is compressed from between the non-breathable

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sheets through the holes. As the press reaches laminating temperature, the holes re-seal and the film is mounted. Although the actual laminating time is really approximately five to seven minutes, the entire temperature adjustment and mounting time will average 10 to 15 minutes. Larger photos (ie: 40"x60") could take up to 30 minutes because of the greater mass of materials.

### Results

Don't forget the overlay foam; it will effect the manufacturer's finish. If "silvering" still results, or if a slight overall pattern of tiny dots is present when removed from the press, don't panic. The mounting was only removed from the press too soon and may indeed be placed back into the press. Remember, however, if 10 minutes is too little time, the laminating may be placed back into the press at the initial 10 minutes *plus* any additional time. Most importantly, vary the time and temperature settings for mechanical and

Photo 3: This pre-perforated, pre-cut, sheet of matte film is ready to layer with overlay foam and place into a press. Note the tiny 1/4" apart air holes for ventilation and air removal.




vacuum presses!

So how long do you leave a mounting package for laminating photographs with perforated films in the press? *Long enough!* Yes, you can put it back in, but isn't it much more time effective to leave it in long enough the first time?

Now that you've refreshed your "laminating with perforated films", follow me to this month's Mastering Mounting for "Canvassing RC Photographs".





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