

Wet/Dry vs. Film Adhesive

Ensure your framing designs are as safe as they are stunning with the right materials.

One of the biggest questions with the discontinuation of dry mount film has been whether creative applications might still be achievable...and the answer is yes! The key element is clarity of the bonding adhesive, allowing for PVA wet mount, wet/dry application, pressure-sensitive film, and historically carrier-free dry-mount film to all be used. Dry mounting may have given way to roller machines for handling digital imagery, but old school techniques are still very much practiced by full-service framers for both mounting and laminating services.

Though dry mount presses have not changed much in the past 20 years, adhesives have, with new products, modified adhesives, and temperatures lowered to better protect art. Heat-activated (HA) boards have also been developed to better accommodate the lower temperatures of digital prints on paper, canvas, and numerous other substrates. And even though many framers have switched to the convenience of HA boards over rolled tissues, film adhesives may only be substituted with PVA wet glue or pressure-sensitive film.



Wet Mounting

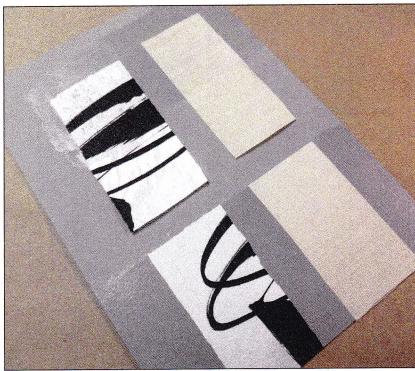
Wet mounting is the oldest method of adhering paper or fabric to a support backing using a wet adhesive or cooked starch paste. Commercial wet glues bond items together using liquid vinyl resin called polyvinyl acetate (PVA) which is a thermosetting adhesive that once dry does not reactivate with water. Popular PVAs include Frank's Fabric Glue, Decor Fabric Mount Adhesive 1340, Decor All Purpose 610 PVA, and Raphael Miracle Muck.

Glues may be applied by brush, roller, or spray gun, and when used in conjunction with a vacuum frame or roller system have more immediate bond. Successful wet mounting requires an application of an even, moist layer of adhesive; proper open time; and weighting as it fully dries and cures. Manual wet mounting—with no vacuum frame or rollers—requires little financial investment and is a decent alternative for mounting oversized items when equipment size limitations are an issue. Use of a cold vacuum frame or roller may increase long term permanency of

Wet test shows (left to right)
Decor PVA 610
W/D mounted,
619 wet mounted,
and Mounting Glue 980
wet mounted.



Chris A. Paschke, owner of Designs Ink in Tehachapi, CA, is a professional picture framer with over four decades of experience. She is an artist, a National Conference educator, has authored numerous magazine series, including *The Essence of Design*, *Design Concepts*, and *Digital Directions* for PFM, and has four self-published books on mounting. She currently writes the Mastering Mounting column for PFM and is a contributing writer to *The Artist's Magazine*, *The Pastel Journal*, and *Watercolor Artist Magazine*. She was honored with the PPFA Award of Distinction for Leadership 2008, the Vivian Kistler Recognition for Innovation Award 2010, and the PMA Distinguished Service Award 2012.



Mulberry paper (left) and sheer silk (right) were tested for adhesive bleed. Top half of each show adhesive saturation; bottom half is raw material. Lower samples were wet/dry mounted, preventing any chance of bleed absorption.

a wet mount by creating a stronger initial bond over manual weighting.

Ethylene vinyl acetate (EVA) is a water-reversible formulation of modified PVA copolymer. It maintains softness and flexibility, clarity and gloss, barrier properties, low-temperature toughness, and resistance to UV radiation. Jade R is a reversible EVA that is an acid-free, archival adhesive which provides a very strong bond similar to Jade 403, making it ideal for conservation work where reversibility is a concern.

Wet Glues and Pastes

Wet glue is a thick paste or commercial liquid adhesive which must be evenly applied to the substrate before positioning the art. Commercial pastes are available from major manufacturers that are starch-based, neutral pH, nontoxic, buffered, and water soluble for removal. A basic PVA wet glue is repositionable while wet, nontoxic, nonstaining with age, dries clear, and has long-term bonding ability.

In late 2023, I did an extensive test of common commercial PVAs, starch, and pastes as wet mounts and wet/dry mounts for ease of use, time, and application comparisons. Wet test shows heavy burlap, polyester

felt, and ink written on sheer mulberry paper, all mounted the same time and temperature using Decor PVA 610 wet/dry mounted, 619 wet mounted, and Mounting Glue 980. The heavy burlap mounted fine with all; the felt absorbed the wet adhesives; and the cockled mulberry paper did not mount flat on the wet/dry, absorbed and cockled with the wet PVA, but the 980 paste did not soak through.

YES! Paste is a starch paste made of corn dextrin, corn syrup, preservative, and water used by artisans and bookbinders. With a pH of 6.0-6.5, it is not embraced as extended term (archival), reversible, nor acid-free. Decor Vacuum Mount Adhesive 3649 is also a vegetable starch.

Polyester felt is notorious for soaking up thin, white glues, often leaving hard spots of glue saturation. When using polyester felt as padding or color toner behind a lightweight textile, that support layer may be either pinned or wet/dry mounted to prevent saturation.

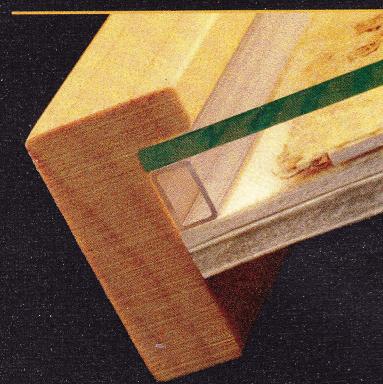


Wet/dry mounted tiered mats. Frank's Fabric Glue was applied to create bevel banding using three solid core ragboards (top), and pin-striped with two solid core ragboards with three sheets of camel Cannon paper between.

Wet/Dry Mounting

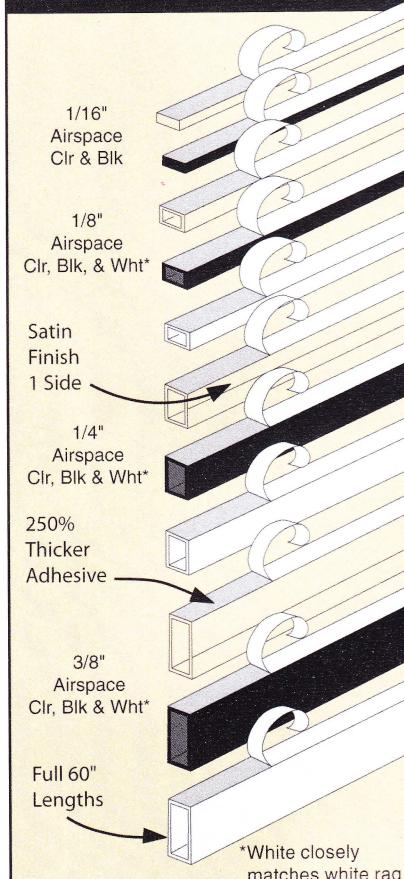
Traditional wet mounting remains a routine technique for fabric applications, but wet/dry mounting is a modified process involving both techniques that is often overlooked. One of the bonding requirements of wet mounting is adhesive absorption,

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(Left to right) Ultra-smooth high-density foam roller replacement, foam roller, fiber roller, 2" disposable natural bristle brush, and plastic storage tub.

which occurs during the process, but there are times that adhesive must be prevented from saturating, as when wrapping a sheer, delicate fabric; thin, translucent paper; or other absorbent material.

My "Creative Mounting, Wrapping and Laminating" book discusses numerous techniques for use of clear adhesives in framing; some solve a problem, while others allow for expanded design possibilities. Stacked 4-ply, tiered mats, wrapped 3D mats, deep bevels, and control of color tinting are all creative opportunities. When pure film adhesive was discontinued, we had to resort to older wet mounting methods, so I researched these more in-depth.

The wet/dry application shown here used Frank's Fabric Glue applied to create the top bevel-banded mat with three solid core ragboards, while the pin-striped version used two solid core ragboards with three sheets of camel-colored Canson paper between. All were wet applied with a roller rather than a brush, allowed to dry, then sized and window cut. The completed 12-ply mats were cut using a Fletcher manual mat cutter with 1500 single-sided blades.

Though brushes, sponge, and textured rollers are all often used for applying wet PVA, for decorative applications it is best to ensure a smooth, even

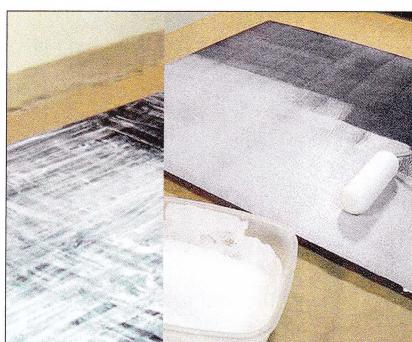
coat with a sponge roller whenever the wet/dry technique is used. The split photo shows the brush texture that remains after application while the sponge is much smoother and more even. A smoother application provides a smoother layering of papers.

Dry Mounting

Earlier this year I announced the availability of Film 4000, the 2024 version of Fusion 4000 and Flobond that allows for dry mounted fabric wrapping in a dry mount press or vacuum once again. Since it is a removable adhesive, it bonds as it cools under a weight.

Suppliers and framers alike have asked why pure film adhesive is not recommended for all dry mounting. Based on the 80/20 rule, there will be one adhesive used 80% of the time and one as an alternative the other 20%. It could be 80% tissue adhesive with 20% film when dry mounting, or reversible 80% preservation hinging and 20% dry mounting, rollers, or PVA wet glue. There will never be one adhesive suited to all mounting needs.

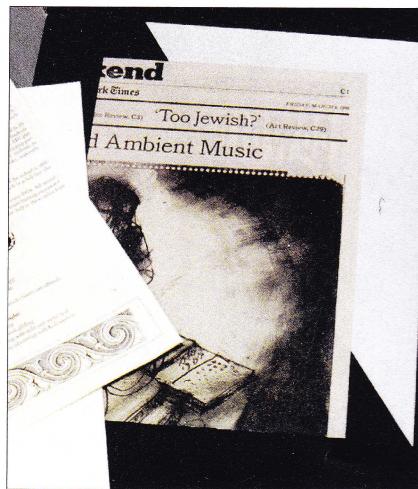
Time, temperature, pressure, and moisture (TTPM) are the four basic elements that must be followed for all mounting but are most often forgotten when dry mounting. Time may be one minute in a mechanical press or 24 hours for a pressure-sensitive to cure. Temperature may be 130°F



Split photo shows the brush texture that remains after application (L) while the sponge is much smoother and more even.

for an HA board, or room temperature (between 75°F-90°F) for a spray adhesive. Pressure may be a drawn vacuum or placing a mount under a glass plate even weight overnight. And moisture can be pre-drying before mounting in a mechanical press or misting before applying wet glue. They all have structural requirements for a perfect bond.

Ghosting is the visual bleeding through of two-sided printing on the verso side of a mount. It is control-

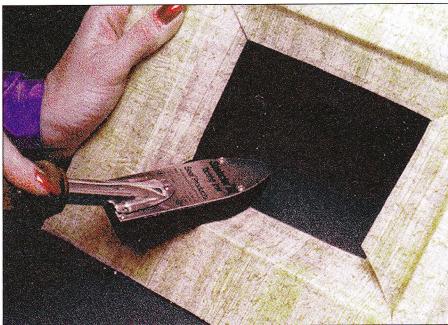
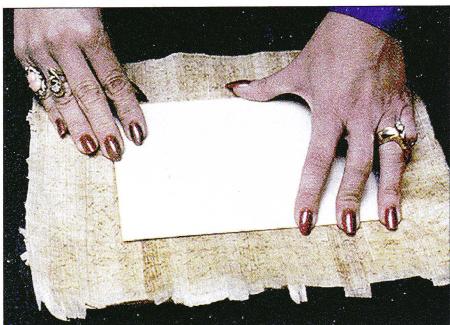


Note the ghosted lettering from the verso side upper right of the clipping when placed over a white background. The lower left, over a black background, is camouflaged.

lable by selecting a clear adhesive to mount to the same-colored substrate as the dominant ink on the verso side. The upper right corner of the clipping, when placed over a white substrate, allows the lettering from the opposite side to ghost through; when placed over a black substrate, the print is camouflaged. This technique is only possible by using a clear P-S or film adhesive with no white tissue carrier, or wet/dry PVA technique.

Wet/Dry vs. Film Applications

The wet/dry technique applies wet PVA, which is allowed to dry and then reactivated in a dry mount press to adhere the layers.



Three stages of mat wrapping with film adhesive: (A) stack with fallout, (B) cut inside opening, leaving 1" and miter the corners, (3) iron the bevels and turn trim to the inside to iron.

A perfect example for this technique was when sheer Eden Natural 100% silk from Frank's Fabrics was selected for a bevel-wrapped liner. Sponge rollers apply smoother, more even layers of adhesive than brushes, and sheer fabrics require the smoothest base possible.

- If wrapping a window mat, refit the fallout into the mat.
- Insert the board with dried adhesive and fabric into the heated press between release papers, and bond for 2-5 minutes depending on the substrate, size, fabric, and press.
- Cut inner fabric, leaving 1" to wrap over bevel; miter into each corner and iron the bevels to activate the film.
- Lay flat and wrap to the back the back of the window ironing to set the adhesive.

- Slightly overlap the rows to assure no uncoated spots and let the white glue fully dry.
- Apply the second coat in the opposite direction to both fill gaps and prevent ridges of adhesive.
- Set press between 190°F-200°F and allow to fully heat.
- The dried glue has a slight tack to it once dry and will hold lightweight materials in alignment.
- Align the fabric and press to hold in place.

Wrapping a window mat is simple with pure film:

- Size and cut the window mat; reserve the fallout.
- Align the film adhesive on the mat, then the fabric, and refit the fallout into window.
- Place into a 200°F press for 2 minutes mechanical, 4-5 minutes hot vacuum, depending on materials inside.
- Cool under a weight when removed.
- Discard fallout; trim edges blunt to window.

- Lay flat and wrap to the back the back of the window ironing to set the adhesive.

There is no visual difference between the resulting bond using a wet/dry PVA or dry mount technique using rolled film adhesive. The beauty of wrapping with either of these adhesives is both speed and efficiency.

You will always have multiple options when mounting your customers' work to a substrate. The trick is to understand each product and method, allowing you to make informed decisions. **PFM**

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