

The Gold in Variety: Spray Adhesives

by Chris A Paschke, CPF

If variety is the spice of life, then why can't spray adhesives be the variety that achieves profits from mounting? In light of all the controversy regarding heat sensitives and not knowing when heat might be tolerable or not, (see *PFM*, "Color Copies: Parts 1 and 2," March and April 1997, and "If You Can't Stand the Heat...Cold Mount," May 1997) it's important to know the options.



In the framing industry, any form of mounting without heat is considered cold mounting. That means any time a cold vacuum frame is used in conjunction with a wet glue, spray, or pressure-sensitive adhesive, it is considered cold mounting. In the commercial photographic industry, cold mounting also refers to mounting without heat, but only means the use of pressure-sensitive roll adhesives and cold laminates.

It is important to always have a repertoire of comfortable mounting options for the times when the favorite mounting process might be a little too uncertain for a given project; That is, the items you are unfamiliar with or have no idea whether or not they will tolerate heat.

Cold Mounting Options

Many framers who end up investing in a dry mount system, forsake all alternative mounting methods, which is not a good idea. Pressure-sensitives are currently the most popular cold mounting alternative to dry mounting, and often the first used when heat doesn't suit the project. Pressure-sensitive films are very versatile, clean, and user-friendly. (See *PFM*, "Ghosts and Pressure-Sensitives," September 1997, and "Float Mounting with Pressure-Sensitives," October 1997)

Wet glues and spray adhesives are also extremely important operations and every framer should be comfortable with the techniques. There are times when wet glue applications might be the only answer for a project, and the same holds true for spray adhesives.

These alternative methods of mounting may be applied by hand using a rubber roller or squeegee, but may also be mounted using a cold vacuum frame, only then qualifying them as cold mounting procedures.

Understanding Spray Adhesives

Spray mounting requires no special mounting equipment, but a ventilation hood or spray booth is highly recommended. Just like wet mounting, once the art has been applied to the substrate it needs to be weighted or placed in a vacuum frame for bonding.

mastering mounting

We've all experienced the peeling up or bubbling of an item mounted with poorly applied spray adhesive. Excessive air dryness, humidity, and temperature can all effect the long-term permanence of a spray. Spray adhesive permanence is directly affected by a number of factors; adhesive, substrate, application, and TTPM (Time, Temperature, Pressure, Moisture) technique.

1) Correct Adhesive

Choosing the correct adhesive for the particular job is extremely important. Using an adhesive designed for porous paper art will never be suitable for a nonporous photograph. A temporary, repositionable spray for graphic arts will never suit a permanent mounting for long-term framing.

2) Choosing the Right Substrate

Selecting the correct mounting surface for the project is as important as choosing the adhesive. Many sprays resist bonding to oil-impregnated surfaces or wax-coated materials. This would include both the art and the mounting board. Substrates including hardboard, fiberboard, particleboard (MDF), and some low-grade newsboards have oils that can soften the adhesive, resulting in bond failure.

3) Applying Enough Adhesive

The proper application of adequate adhesive is extremely important. Bond failure can often be the result of an insufficient amount of glue applied to the substrate. Always apply the adhesive in two opposite directions, in a cross-hatched pattern, to ensure full

coverage (diagram 1). Also, begin spraying off the edge of the print or substrate to prevent puddles or

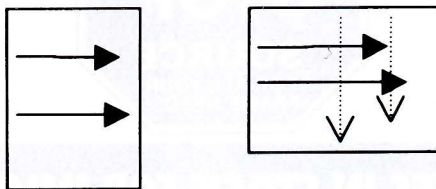


Diagram 1: Apply spray, then rotate substrate 90 degrees

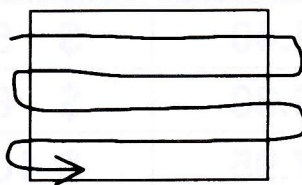


Diagram 2: Begin off the left edge and continue past the right in either one continual motion or in separate passes.

leaving dry areas (diagram 2).

4) Good TTPM Technique

Understanding and integrating the correct "open time" required first for the solvent to evaporate, second for the adhesive to get tacky, is imperative. When the can states 15 seconds to 30 minutes as working time, or 2 to 3 minutes drying time, take notice, it makes a difference.

Pay attention to the temperature variations if using a cold or hot press (vs. hand applications). Times will vary depending upon temperatures required.

Pressure can't be stressed enough. If mounting by hand, placement beneath a heavy glass or metal weight is mandatory overnight, generally 12 to 24 hours for

maximum bond. If placing in a vacuum frame, maximum bond will occur in 1 to 12 minutes depending upon porosity and adhesive brand.

The evaporation or drawing of all the moisture possible from the project is necessary for a good bond. The art and substrate should be acclimated to the basic humidity and temperature of the frame shop environment before mounting to help neutralize all mounting materials.

Selecting Adhesives

There are many good spray adhesives on the market. Selecting the one that best suits your application is extremely important. Notice the spray's flexibility of mounting both porous and nonporous items. Often when the art is nonporous, such as a photograph, increased drying time is required. Pay attention as to whether or not the sprays may be mounted by hand or by using either cold or hot equipment, and always consider the safety issues.

3M "Super 77" is an industrial strength spray designed with a long "open time" of 15 to 30 minutes allowing for additional spray application and ensuring proper coverage before mounting. It lays on the surface of porous items rather than soaking into them and works with a wide variety of materials. Depending upon selected application to either one or both surfaces, the mounting may have an extra-strong hold or be more temporary. Check the label for details.

Cold or Hot Applications

A spray specified for use with a cold frame, rather than hand application, is 3M "Vac-U-Mount". It requires a 2 minute "open time" with a maximum of 10 minutes for placement of the art. This is the time allowed for the solvents (which allow the adhesives to be sprayed) to evaporate and the adhesive to become tacky for mounting. Once prepared they only need to be in a vacuum frame for 1 to 2 minutes.

Many sprays are also capable of being placed in a heat press to expedite the drying time and moisture evaporation from the project. There is an adhesive from Canada by Spraytex Industries called "Good Glue" which states it can be used with either porous or nonporous (RC photos) items. It is also designed to be used either with a cold vacuum frame 2 to 5 minutes, or in a heat press of 175° to 195°F (79.5° to 90.5°C), for 1 to 2 minutes.

The Print Mount Company also offers a cold or hot spray adhesive. "Sure Mount Spray" claims to be an acid-free, water-based, reversible, starch, spray adhesive. It will mount paper, fabrics or photos best to porous substrates including matboard, foam board and masonite. Drying time is always effected by the porosity of the materials and technique (hand, cold or hot). Maximum bond will be achieved in 3 to 12 hours by hand; 2 to 5

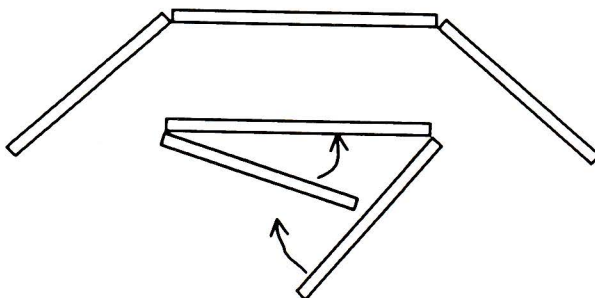


Diagram 3: This portable spray booth may be folded up for storage when not in use, but the folding leaves may stick if oversprays of adhesive are still wet when stored.

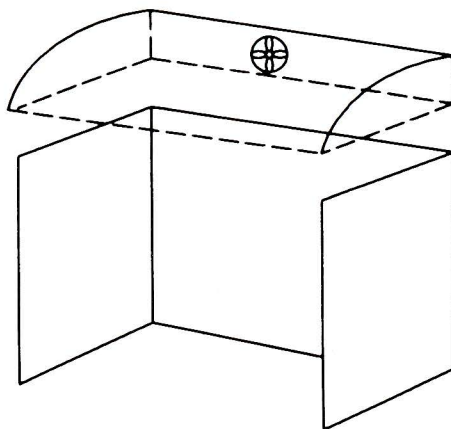


Diagram 4: A spray booth permanently set-up with a ventilation hood, fan, and exhaust system. Excess use of spray adhesives will require ventilation facilities.

minutes using a cold vacuum frame; and 1 to 4 minutes in a 195°F hot press. Nonporous photos might take 10 to 15 minutes in a heat press to effectively bond.

Health and Safety Measures

If spray adhesives are selected as your mounting technique of choice or if it is just a good alternative, toxicity and mess must be considered as part of the big picture. Solvent-based sprays should never be inhaled, so proper ventilation is required.

Adequate ventilation defines as "the flow of enough air to dilute

contaminant, either vapor or dust, to a safe level." An open window or door might be adequate for an occasional project, but regular use would require a spray booth and/or exhaust fan to meet all OSHA safety standards.

Keep the spray mounting area contained so over-sprays don't interfere with other projects (diagram 3). Portable spray booths or screens are easily constructed and may be stored when not in use.

Wrapping Up the Gold

Profit is obtained by being a full-service frame shop that goes the extra mile. The extra mile sometimes involves using alternative techniques when

special projects come through the door. Spray adhesives are just another part of the bigger picture. Understanding there are many types, knowing the proper techniques, and feeling familiar enough to have the confidence to use spray adhesives, is all part of your job as a professional framer. Go for the gold! ■

Chris A. Paschke, CPF, GCF, owns Designs Ink, Oxford, Connecticut, featuring commercial and retail custom framing, product consultation, design and education. Specializing in mounting, matting and design creativity she works with numerous industry leaders. Watch for her new book, The Mounting and Laminating Handbook, scheduled for release this summer.