

Mastering Mounting

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Foamboard 101

Like a freshman college course, Foamboard 101 is designed to help you better understand all the ins and outs of our subject: that funny twenty-first century material, foam-center board. Although educators and manufacturers would like to think it's the one material needed in the shop—capable of being used for both signage and framing—it does not work well as a substitute for wood and metal mouldings. So, how will this article fit into the theme of this month's issue on "creative moulding design?" Wait 'til you see the routed, stacked, newly invented foam moulding in the following pages. April fools!

Foamboard Limitations

Foamboard will never become a substitute for moulding, at least not in the traditional sense. It obviously lacks the strength and stability of wood and even when stacked offers only a visual variation. There are tougher boards such as Gator-foam (International Paper), Nucor (Savage), and MightyCore (HuntGraphics) all which have been designed for large format usage and are not really the substrates I will be discussing in this particular article. Though they are more rigid, they still do not have moulding potential.

Manufacturers have availed us with foam-center boards that are clay-coated, acid-free, 100% cotton rag, micro chamber, white, black, and colored. All the possible combinations we could ever need! But, remember these are still produced as filler and backing boards designed for use in framing behind the mounting board.

They are not truly conservation-quality enough for mounting directly. Foamboard may be used as a filler behind conservation 4-ply 100% cotton mounting board, but not in place of it.

For years the controversy about the conservation limitations of foamboard has kept us wondering about its use in conservation/preservation framing. Conservators still remain unresolved over the outgassing issue, but current conservator thought is that as long as raw uncovered/unsealed foam edges are not exposed directly to UV light, it may not outgas at harmful levels.

Foamboard Potential/Warpage Control

Aside from preservation, foam-center boards may be used for mounting posters, photographs, and fabric—in the correct situation. The possibilities for both creative and technical uses of foamboard abound. On the simplest level there is the mounted and laminated poster, map, or chart that is fitted into a narrow metal or wood moulding that requires additional stability using a more warp-free substrate, such as foamboard.

The thickness of the selected board will also effect warpage control. An image up to 8" x 10" may easily be controlled on 4-ply matboard, but 8" x 10" to 16" x 20" pieces requires at least 1/8" foamboard or its equivalent, and over 16" x 20" should be mounted to 3/16" foamboard or similar. Thicker 1/2" foam or the more rigid boards mentioned above may be required for larger format images over 32" x 40", whether cold or hot mounted.

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Keep in mind that countermounting may be required to assure the flatness of the mounted image if it is not intended for a frame.

Foamboard as Filler Board

Traditionally, corrugated cardboard was chosen for filling the back of a deep moulding to prevent punctures through the dust cover. Foamboard is the upgraded twenty first century substitution.

Both are lightweight and durable, both prevent punching through the dust cover, but foamboard will not transfer acids through the mount board to the front of the framing package the way cardboard will. Foamboard is also a great way to recycle: use the fallouts and endcuts that may be too small or dented for new projects but may be just perfect for filling.

Models and Small Display Pillars

It's been known for years that foamboard makes great models. All colors and thicknesses of foamboard have been used for scaled down versions of everything from stage sets to architectural designs. It is very easy to cut and glue, and is lightweight and durable.

Foamboard may also be used to construct small-scale pillars and cubes for display. Constructed shapes of foamboard wonderfully showcase small handcrafts, pottery, and jewelry. A piece of $\frac{3}{16}$ " foamboard may easily be bevel wedged using a pistol grip X-ACTO model cutter knife with a bevel attachment to produce the perfect 45° angle for wedging out a v-groove for folding.

Keeping one edge of each side connected, including the lid and bottom of the box (Diagram 1) creates boxes or cubes. All edges and inner folds should be beveled to 45° for a clean fit. Most commercial mat cutters have a steeper bevel angle and will not allow for a 90° corner, so hand wedging is usually required.

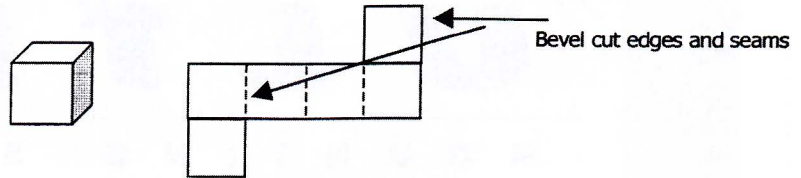


Diagram 1. All sides of the cube laid open should be bevel cut at 45° to make a perfect 90° corner. Completed, the folded box may be taped or hot glued, painted, or covered with fabric or decorative papers prior to pattern cutting.

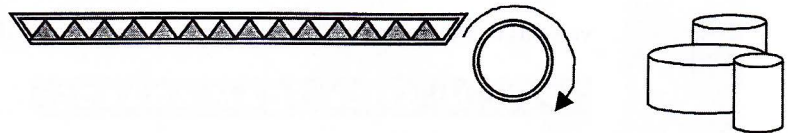


Diagram 2. Once the column has been bevel wedged, wrap it into the desired shape, glue or tape and cap with a circular top and bottom.

Pillars and circular shapes are also easily constructed by wedging multiple 45° strips into what will be the inside of the pillar (Diagram 2). After cutting, the pattern is then rounded or shaped into either a round or elliptical cylinder depending upon the shape of the matching top and bottom pieces. Wedges nearly touching will produce a full circle while spaced wedges will create a flat-sided cylinder such as an octagon. Keep the limitations in mind, but never cease to experiment.

Illusionary Boxes

Ideally, framers hope to sell higher-end multiple matted, glazed, showy framed posters that emulate high-end paintings, like a Monet poster from the Metropolitan Museum of Art. But there are many customers who still insist on the lower-end framed presentations. Consider for a moment the illusion of a moulding, or more correctly, a box. Though foamboard may not really be used as moulding, it can create the illusion of a box edge (Photo 1).

In *PFM* May 1993, I wrote about "Illusionary Boxes." I still feel they are a terrific option for the "black hole" between large, matted, framed posters and a plain mounted/laminated poster on foamboard. Quite simply, an illusionary box is a laminated poster that has been

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mounted to a $\frac{3}{8}$ " or $\frac{1}{2}$ " foamboard substrate, depending upon the size of the image. Then $\frac{1}{2}$ " foamboard strips are cut 1" to 2" in width, the length and width of the mounting, and affixed to the back edges of the substrate to create a box (Photos 2a and 2b). (Of course, for the retailers who'd like to offer this option but would rather not do the work themselves, there are always custom mounting services available.)

First, attach the foamboard using ATG tape, preferably 3M 969 tape or equivalent for extra strength. Once the box side pieces are attached, reinforce the box sides using either 3M #3797-TC Jet-



Photo 1. Completed "Illusionary Boxes," mounted and laminated then reinforced with $\frac{1}{2}$ " foam board strips create the illusion of a solid unit.

Warping may also be lessened on larger pieces when using the previously mentioned stiffer foamboards or wood siding.

Shipping Boxes

Another great use for thicker $\frac{1}{2}$ " or stacked $\frac{3}{8}$ " foamboard is for shipping boxes. Construction of either disposable or reusable containers for framed art or objects is quick and easy. (See "Shipping Boxes, Parts 1 and 2," November and December 1995, *PFM*.)

The same $\frac{1}{2}$ " foamboard used in the illusionary box description is used for these shipping boxes, reinforced with 3M #3797-TC Jet-Melt hot glue sticks and the 3M Polygun-TC.

Incidentally, this hot glue gun is



Photo 2a. An overview of a back corner of the assembled completed illusionary box, with 1" black linen tape and $\frac{1}{2}$ " x 1" strips used for mounting the box sides.

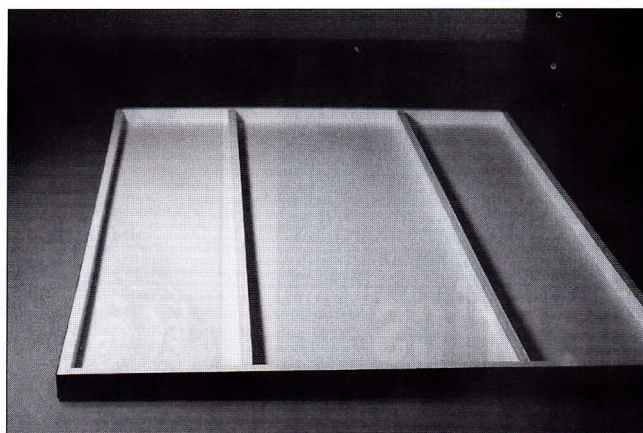


Photo 2b. A full shot of the back of the box also illustrating the reinforcement pieces cut the length of the mounted/laminated box.

Melt hot glue sticks or a heavy-duty linen tape (Photo 3). If too thin a substrate is selected for too large a poster, warping may still occur over time even with the side pieces and cross reinforcements. Wood strips (1" wide) may also be used. In fact, Formica-type countertop edging (available at home improvement stores) can also be used to wrap the sides instead of linen. Keep in mind that more expensive materials result in a higher priced project.

one of the best kept secrets in the industry. According to Hugh Phibbs (*PFM*'s Preservation Editor) and his sealed package longevity testing, the hot glue stick mentioned above holds its pH neutrality better than any other he's tested in years.

Boxes are constructed with drop spine (pictured), lift top (like a full-sided shoebox), or simple close (with a lid cut with no overlap fit to size) depending on long-

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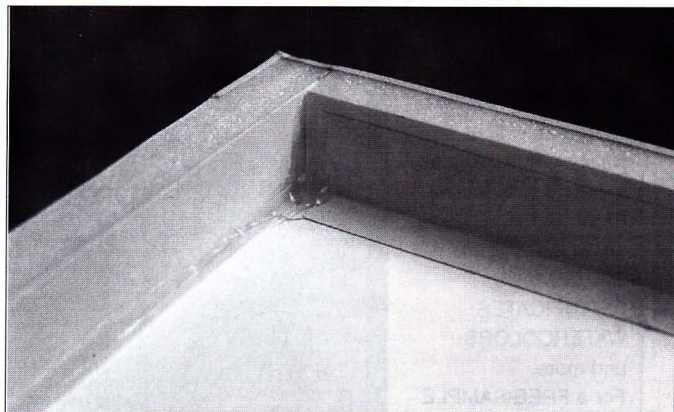


Photo 3. A detail close up of hot glued side vs. linen taped inner borders.

term use. The $\frac{1}{2}$ " foamboard holds solidly and once eggcrate foam is cut to line the inside, the boxes pass shipping safety requirements (Photo 4) and prevent breakage.

Shadow Boxes

It should come as no surprise that shadow boxes are on this list of foamboard uses.

One-piece, cove designs, window showcases, and platform dimensionals are all possible box designs that may be constructed using various foamboard thicknesses and techniques. Future articles will showcase these design constructions as well as both hot and cold mounting applications.

One-piece boxes are simply defined as a piece of foamboard (or matboard) scored and folded to create the entire box, sides and bottom, all in one unit. Fabrics and decorative papers may be added by hot or cold mounting methods and corners may be completed in a variety of methods. The idea is to have a much quicker



Photo 4. View of open, drop spine, reusable-shipping box lined with eggcrate foam. Overall size of this box is approximately 26" x 38" and is about 6" deep.

assembly than the more traditional method of assembling loose side strips.

The thicknesses of the substrate selected for the box itself should be determined by the overall expanse of the box and the depth of the moulding. Benefits of foamboard as a box substrate include a more rigid backing less that's likely to bow, and easy to sew or mount into. Carved out foamboard can support recessed 3-D objects, while shelves may be created for a more free standing appearance. More details on this next month in "Shadow Boxing Made Easy, Part 1."

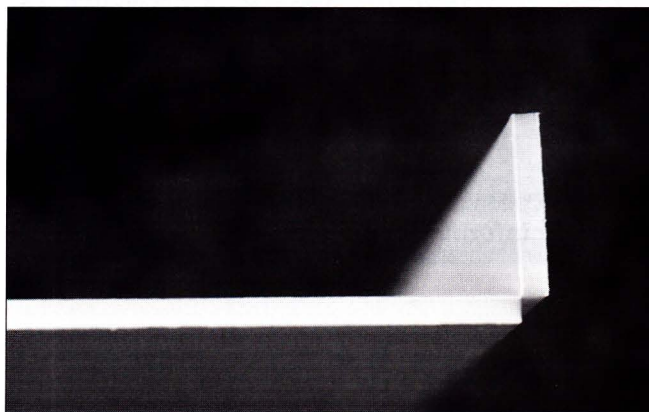


Photo 5. Corner details of a folded side of a one-piece shadowbox prior to mounting fabric or decorative papers. Notice the added width of the $\frac{3}{8}$ " foam to the total width of the bottom of the box.

Wrap Up

One of my most favorite applications is using foamboard for wrapping mats. We use foamboard for backing and mounting boards, but seem to forget its versatility for other things. The marriage of foamboard products and beautifully mounted fabrics and decorative papers for unique upper end framing should be part of any frame designer's repertoire. Wrapped foamboard mats, displays, shipping boxes, and shadow boxes are only some of the possibilities.

Why foamboard? Because it's there. Why not use it for anything and everything? Since we save scraps from most products we frame with, the pieces of foamboard sitting there in the cabinet or corner of the room should be far more useful than fire fodder. Yes, it makes terrific kindling, but also can make you more money! ■