

How Do You MAKE ...

MAKING BRICKS FROM URETHANE FOAM RUBBER



AUTHOR HOLDS A SAMPLE BOARD
OF BRICK TEXTURE MADE BY
USING FOAM RUBBER

What the process is

In years past I've used a variety of different materials to form dimensional brick shapes, but wasn't all that pleased with the results for a variety of reasons. A hard material like wood is difficult to cut to fit, and is also very heavy, although it is also very durable. Celotex insulation, or Homosote, is lighter and easier to cut but it produces a really nasty sawdust, especially when cutting hundreds of small shapes. The oily material sometimes used to keep it from rotting is also problematic from a fire-retarding standpoint. Polystyrene foam can also be used, and it is lighter in weight but not any more fun to cut out. From an artistic point of view, those materials often seem too thick to give a "realistic" appearance to the brick, which actually sticks out from the wall much less than the half-inch or so that wood, Celotex, or polystyrene does.

Another problem with these rigid materials is that they absolutely will not work on a pliable surface such as a canvas ground cloth.

Over the past few years, I've been experimenting with using foam rubber products to produce a really handsome brick texture, and have used it in several different ways that have all been fairly successful.

I like this method for several reasons:

The foam is very lightweight.

It is easy to cut into custom shapes.

It is flexible.

You can coat it with a sealer such as Jackson or Sculpt or Coat to give it a homogeneous texture.

This technique will work on a variety of surfaces, both rigid and flexible. You can also use it to make and apply non-brick textures of a similar nature.

Materials

Urethane or latex foam rubber, polyvinyl glue, water-based sealer, paint.

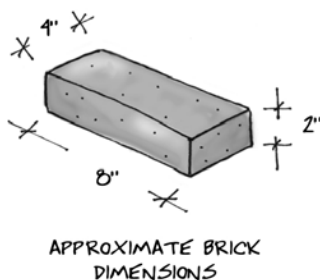
Tools

Something to cut the foam rubber into strips, scissors, measuring tape, chalk line, brushes.

Method

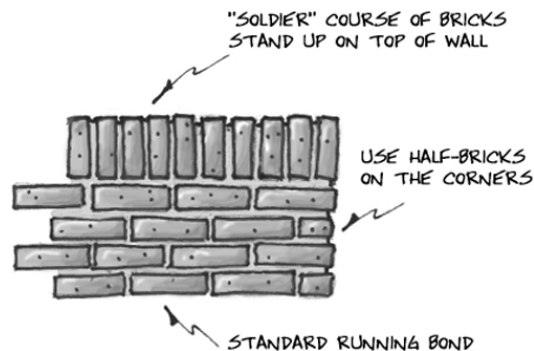
This is an amazingly simple process that is easy enough for just about anyone to accomplish. Since I teach at a school, this means even beginning students can help out. The hardest part is coming up with the basic strips of foam rubber to cut down into the brick shapes, and from there on anyone with a pair of scissors and a 4" brush can do the job if properly supervised.

This first description is of the basic method I've been working with, and variations will be mentioned later.



You will need some foam rubber strips that can be used to make the basic brick shape. If you are doing a brick wall, the individual bricks will be viewed from the side rather than the top. Most bricks are somewhere in the neighborhood of 2" thick x 4" wide x 8" long. If the bricks will only be seen from the side you will need

a large number of 2" x 8" pieces. Some of the bricks like those on the corners will show the end profile of the brick that is 2" x 4". Still other pieces will need to be odd shapes to fit around windows, doors, or other architectural elements. On a "real" brick wall, the bricks are held together with mortar that is recessed a bit from the face of the bricks themselves. Sometimes the mortar is almost flush with the face of the brick, and sometimes it is recessed about a 1/4" or so. So you need to use a fairly thin material for the bricks. Really thin strips are difficult to cut from a block of foam, and I generally shoot for the 1/4" thick sort, and then depend on the sealing process to lessen that amount somewhat.



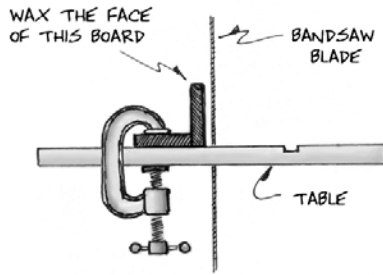
Urethane/latex foam rubber comes in different densities that are referenced by the weight of a block of the material. Fabric stores most often carry foam padding that is about a 1-pound weight, meaning that 1 cubic foot weighs 1 pound. This density will work, but it is hard to cut because it is so flimsy. If you can find a heavier weight, denser foam, it will be much easier to slice into thin strips. We always seem to be in too much of a hurry on these projects to wait for an order to come in, and the fabric store foam has generally worked well enough, so that is what I've used for most of the projects discussed here.

There is a primer about foam products at <http://www.monmouthrubber.com/info.htm> that reveals probably more than you want to know about urethane foam and other rubber products. It is fairly interesting reading all on its own, and covers some related topics. There are some new web sites for manufacturers of foam products that list thin sheets of various sorts, and these work really well. Some types are even flame retardant, but they seem to dry rot rather quickly. Of course thin sheets of foam do not require slicing, and that cuts out a big chunk of the work of making the foam bricks.

There are a couple of different ways of getting the thin strips of foam rubber. One way is to use a band saw to slice the strips from a larger block of foam. If you purchase foam padding that is 2" thick, then you

can get your 1/4"-thick by 2"-wide strips by simply ripping the foam through the saw. You must use a band saw; a table saw will just suck the foam down inside of itself.

Even the band saw is a bit problematic. You need to have a very sharp blade with a medium number of TPI, somewhere in the 6 to 10 range. You will need a rip fence attachment to keep the foam block straight as it goes through the saw. If your band saw does not have a rip guide, clamp a block of wood to the table and use that instead. The fence will have less drag if you rub a piece of candle wax against it to make it slicker.



CONNECT TWO BOARDS AT A 90 DEGREE ANGLE. CLAMP TO TABLE TO MAKE A RIP FENCE.

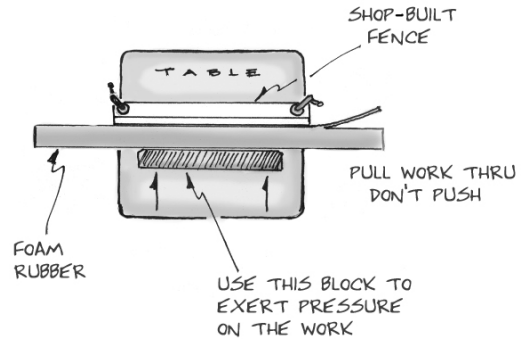
You can lessen the tendency of the foam to be drawn down into the saw by putting a piece of tape over the throat plate where the blade passes through the saw table. This helps to support the foam better.



YOU CAN LESSEN THE TENDENCY OF THE SAW TO PULL THE FOAM THROUGH THE TABLE BY USING TAPE ON EITHER SIDE OF THE BLADE

Finally, it is very important to pull the material through the saw rather than to try to push it through like a piece of wood. Wood doesn't compress like the

foam does. Pushing on the foam causes it to bunch up and get stuck on the blade. Hold a piece of wood against the side of the foam as you pull it through to hold it in position and to protect your fingers from the blade. At a certain point, the blank pad of foam will be too small to go through the saw effectively, and you will have to waste the last little bit of it.



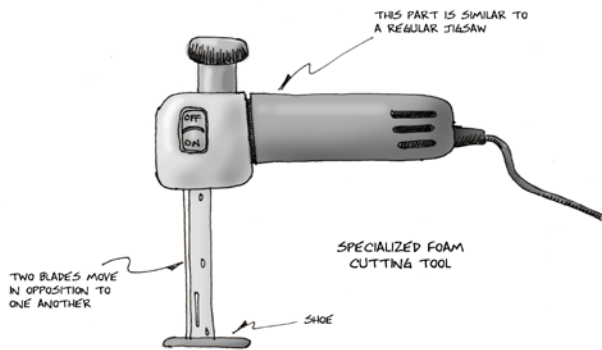
This is not a perfect process. Some of the bricks will show striations from the sawing action, and some will have quite large puckers on them. I like the textural quality that this imparts to the finished project, so for me this is actually a good thing. Some of the bricks will be thicker and some will be thinner, so you can get a more "random" look by carefully spacing these out over the surface you are creating. You might even want to create extra defects in the foam with a pair of scissors if your brick wall is to be especially ancient and worn down.



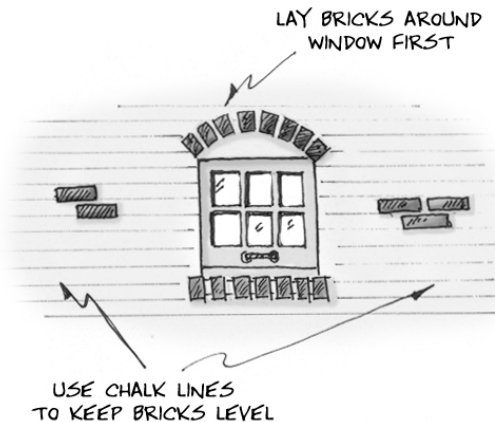
MISSHAPEN BRICKS ARE OFTEN THE BEST ONES. SPACE THEM OUT RANDOMLY.

As an alternative, Bosch makes an industrial foam cutter that is used mostly in upholstery work. It looks sort of like a jigsaw, and has two thin blades that move up and down in opposition to one another. It works in much the same way as an electric carving knife used in the home, which many people use to carve foam for other projects. This tool costs about \$400 and works really well, but you will not have the advantage of a rip

fence. Because I actually like the imperfections that come from making the strips on the band saw, there hasn't been much incentive for me to take this route.



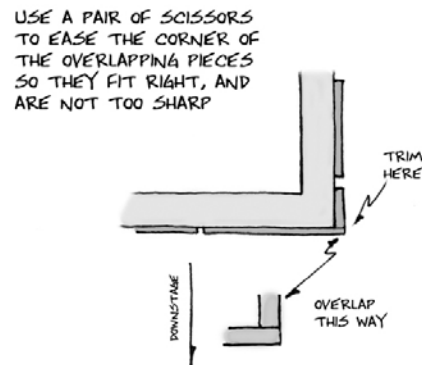
In order to place the bricks on a wall, you should lay out some registration lines to keep the bricks straight as you apply them. If the bricks are 2" tall, and you would like to have a half-inch space between them, make a chalk line every 2½" on the wall. If you would like some other dimensions, just use multiples of whatever they are. If the bricks are too big, or the mortar lines too wide, the proportions will seem off. So even though larger sizes are easier to do, they won't look as good in the finished project.



One of the fun parts of this work is the different patterns you can create around windows, doors, columns, etc. I generally just do this "by eye" without making any markings, because they are so easy to see. The problems always come in where you have a large

expanse of bricks that slant up or down slightly. Of course this technique is not really intended for huge blank surfaces because making all the foam bricks for something like that is fairly labor-intensive. You should lay in all of the fancy work around doors and windows first, before starting the flat work.

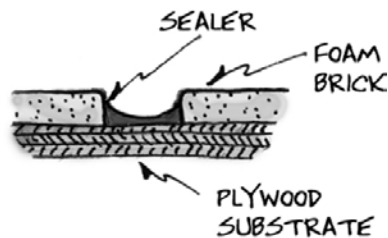
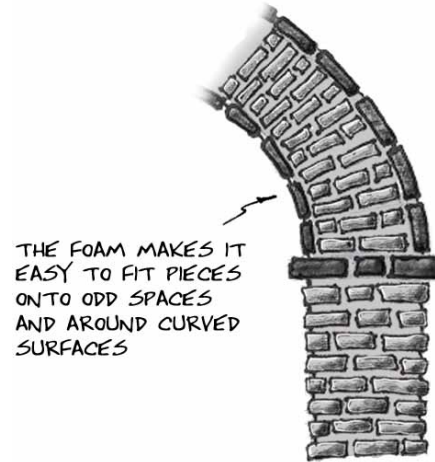
Use a pair of scissors to cut the strips of foam rubber to the right lengths. Use yellow or white glue and a brush to apply the foam to the surface. Use enough glue to make a good bond between the foam and the wood substrate. Of course the glue bonds well to the wooden surface, but it also works well with the foam because of its porous nature. Lay in a fair-sized patch of the glue and press the foam bricks firmly into place. This goes really quickly. If you have a corner to go around, be sure to put the side pieces on first, and then the parts that face the audience. That way, the overlaps will show less. I haven't had much luck in trying to bend the foam around the corner; it seems to work better with two pieces. The sealer will get rid of most of the imperfections.



Laying out the straight bricks goes really fast. You can do just a running bond, or insert some 4" pieces as would be found on an older structural brick wall. You can also lay in soldier courses across the tops of the wall, whatever is appropriate to the design. Use a pair of scissors to trim off any excess from the corner bricks, and also to ease the edges of any bricks that stick out farther than the rest.

After the glue has set up, use a very liberal coating of Jackan or Sculpt or Coat to seal the foam and soften the edges of the bricks. This is a very important step, and the project will not look good if you skimp on the sealer. You will probably need at least two layers to do the job effectively. With no sealer, the foam will have a porous appearance that will be immediately apparent to the audience (and the producers . . .). The sealer has

another affect that really helps “sell” the look of the process. If you work the sealer down into the mortar lines well so that it fills them up somewhat, they will have a slightly rounded look to them that is much more like a real brick/mortar line. I like the way that the sealer can be used to add even more texture in the way you use the brush to make it thicker in some spots and thinner in others. You can also apply a final coat of sealer with a roller so that it has a slightly nappy appearance, and then flatten it out with a trowel or float after it is half dry. This will create lots of tiny fissures for glazes to run into. If you apply a fairly thick last coat to just the face of the brick, you can use a comb to give the surface the same appearance as “brushed” brick.



THE SEALER NOT ONLY GIVES A RIGID COATING TO THE FOAM, IT HELPS TO CREATE A MORE REALISTIC JOINT LINE BETWEEN THE BRICKS

After the sealer has set up, you can paint the brick in whatever style you prefer. I like to start out with several different colors mixed from the same couple of base hues. I make these fairly bright, and then tone them down with glazes toward the end. It is usually easiest to paint the mortar after the brick, but of course before the glazes.

I have tried a number of variations on this theme, using different products and substrates just to see what is possible. The first attempt was for *Tale of Two Cities*, which used the technique in two different ways. The first involved a number of brick arches that had a mixture of curved and flat surfaces. These were faced with regular and bending plywood. Lots of odd-sized bricks were required, so being able to cut them out of foam with a pair of scissors was appealing. Even more important, since some of the surfaces were curved, I needed to make the bricks from something that could easily be bent and attached. The foam worked really great for that. For the most part, we just stuck the foam

pieces on by eye, fitting them in most appealing way, by the method discussed earlier.

This show also had a groundcover that went on top of a raked platform. In the opening of the show, workmen were transporting a barrel of wine that accidentally broke open and spilled out onto the street where the poor tried to sop it up with rags. This is a fairly important symbolic element for the play and sets the scene for all of the bloodshed to come, when the streets run red for another reason. The floor covering needed to do several things. It had to fit over an irregular curved surface, it had to be removable so that the show could be transported to another theatre, it had to be waterproof, and it had to have a stone texture. Although the large barrel actually had only two gallons of red water in it, we still needed to be able to get rid of it somehow, so a drain was installed in a hollowed out place near the bottom of the rake. Most of the fluid went through a sink drain and the rest was dried up by the action of the characters.

A heavy canvas was used for the substrate, and Pergo foam underlayment was used to form the paving stones. These were cut to shape with scissors, and then the corners were snipped off to give them a more rounded profile. The stones were secured to the canvas using Spray 77. We thought that this would leave the assembly more pliable than using any other sort of liquid glue. Numerous layers of Sculpt or Coat were used as a sealer. I was worried that the foam would come off of the canvas during the action of the play, but this was not much of a problem for the short 3-week run of the play. Several bad pieces came off right away, but these were repaired as were several torn pieces of foam. It was great to have such a nice texture on the floor.



THIS HERRINGBONE PATTERN
WAS CREATED ON CANVAS
USING PERGO FOAM UNDERLAYMENT

Another example of using this same process in a different way was in a production of *Suburbia*, where a concrete block wall was required for the outside of the 7-Eleven store. Of course these blocks were much larger than bricks, but other than that it all worked much the same way.