



Sculpting with Milestone

Supplies

White or gray cement

Milestone powder White or gray

Milestone acrylic liquid

#70 grit sand

Wire plasterers lath 3.4 # or 2.4 #

16-20 gauge wire

Universal tints for coloring

Tools

Tough gloves to protect hands from sharp wire lath

Latex gloves for protection from cement and sealers

Pliers and wire snips

Putty knives, trowels, carving implements as needed

Bondo squeegees for curved edges if desired

Paint brushes and/or pads if needed

Rags

Buckets and mixing tools

Sandpaper

Sanding block for sanding flat surfaces.

Synthetic steel wool or Scotchbrite pads to use for

smoothing finished pieces or as scrubbies for

cleaning tools.

Respirator for fumes recommended when in enclosed

areas.

Dust masks for protection when sanding or working with

dry powders.

Use of a trowel or a putty knife

It may take a while to get used to using a trowel or putty knife. Practicing on a piece of Masonite or other smooth surface will help. The angle of the blade greatly changes how the plaster goes on. A sharp angle from the work may pull it very tight and thin where a gentler angle might allow for more flow. Pressure is important as well. Pressing hard will get a very different result from a lighter pressure. Milestone, when applied with a lot of pressure using steel tools, especially on a second coat will tend to leave dark burnish trowel marks, which in moderation, can create an interesting look. Plastic tools can eliminate this effect. There are many variables and it takes practice to get the feel of it.

Step #1

Creating your form: Create a form with the wire lath using your snips and pliers. For starters make a simple shape that will create a solid strong form. Use wire to “sew” together pieces of lath if you need to, overlapping the pieces by about an inch to create strength. If you have a raw edge of lath on your piece, you can bend it over to make a stronger, less sharp edge to work with. Wire lath is available in 8X2 ft sheets in two different weights 2.5 pound or 3.4 pound (weights are per square yard). It is possible to use Re-bar, which comes in 3/8”, 1/2”, 5/8”, and up to much larger sizes by 1/8” increments to reinforce lath based sculpture often without welding. Smaller reinforcing can also be done using number 9 wire which is about 1/8” in diameter or 1/4” pencil rod. The supplies for these kinds of projects can be found at most plastering supply stores. In Seattle, most of these supplies can be purchased at Salmon Bay Sand and Gravel.

Step #2

Your cement base coat, or “scratch coat”: In a bucket, mix one part gray or white cement and one part #70 sand with 1/2 Milestone acrylic liquid. It is helpful when mixing cement and milestone powders with liquids, to put the liquids in first so the powder doesn’t clump on the bottom. Mix it thick enough to create a soft “pancake” and press it into the lath on your form. The mix will begin to dry out as you work so add a very small amount of water periodically and remix it to keep it moist. Once you have applied a “pancake” avoid reworking it later in your process as that will likely cause it to crumble. Apply the pancakes quickly and allow them to adhere to each other. Remember that it is okay for your first coat to be rough; it does not have to be the finished product. Allow it to dry for a day or so. Cement can be purchased places like Home Depot.

Step #3

Sanding and carving your base coat: Allow your form to “set up” but not dry. There is a window of time when the form is strong enough to sand and carve but has not yet completely dried. It may take 20 minutes to a few hours to get to that point depending on how thick your piece is. Sand and carve it to form the shape you want. Once it is dry it will be too late.

Step#4

Finish sand coat, or “brown coat”: Mix in a bucket one part gray or white milestone powder (you can use cement for the brown coat), one part #70 sand, and acrylic liquid until thick. Spread it onto your form, smoothing it and working details. Because this mix has the acrylic liquid in it, this coat will bond well to your base coat, and be slightly more flexible and resistant

to cracks. Allow this coat to set up (but not dry) like we did with the above base coat and repeat the sanding and carving process to create more finished detail. Allow it to dry completely when done. Use #80 grit sandpaper for the carving/sanding process. For flat surfaces you may want to use a sanding block. Artisan Finishes carries Milestone powder.

Step #5

Finish coat: If you want your finish milestone coat to have integrated color, add any universal tint colors you choose into some acrylic liquid and then portion out the needed amount you want into a bucket. Save the rest of the colored liquid in its original container, as you may need some of it later on to thin your mix. You need the mix to be about the consistency of frosting. Apply the mix with latex gloved hands, a putty knife, trowel, or if thin enough, even a paintbrush. How you apply it depends on the look and texture you want. It is a creative process and experimentation is the key. You can even score it, or create rough textures. Allow the coat to dry. Universal tints can be purchased by the quart or in 2-oz tubes in some paint stores. It is good to check first. Some paint departments will put a little bit in a container for you (that you bring) from their tinting machines.

Max 10 % of color in mix. On thin veneers that are non-structural color coats I will sometimes push the limit on the pigments I add to get the color I want.

You will want to sand your finish coat after it is totally dry. Use a #150 grit or #180 grit sandpaper.

Step #6

Staining and skimming: It is possible to skim another color coat of thin milestone mix onto your previously dried coat if you like the look of it. Create this by adding extra colored acrylic liquid to your mix to thin it out and then apply. This can create many interesting effects. You may want to stain your milestone finish coat with a mix of 50% water, 50% acrylic liquid, and desired added universal colorants. This also creates interesting effects and adds depth to your piece. You may apply as many layers of stains as you want, letting the previous one dry before applying another. If you desire more of sheen, use all acrylic liquid and no water for your stain.

Step #7

Sealers: We generally use Cementics Urethane sealer especially made for milestone to seal our products though there are many other options. Apply the Cementic Urethane sealer with a rag using circular motions to prevent ugly linear streaking. You may apply several coats depending on the sheen you want, letting it dry in between coats. For larger flat surfaces, apply sealer with a paint pad, and then rag it in. Apply the coats thinly, as it will puddle and drip if applied too thick. Cementic Urethane sealer will darken and intensify the color of your piece. Artisan Finishes carries this product.

511 Impregnating Sealer: If you desire no sheen at all, but still want the protection of a sealer, you can use 511 impregnating sealer, especially made for concrete. It is expensive but goes a long way and does not darken or intensify the color of your piece. It is possible to add 511 over the Cementic Urethane for extra protection especially if your piece will be outside or in contact with water. This can be purchased at places like Home Depot for approx. \$26.00 per quart.

Enviropoxy: If your piece will be used in a place where something could stain it, Enviropoxy is a necessary protection. This can be applied over Cementic Urethane, 511, or applied directly onto the Milestone. Enviropoxy applied to the Milestone directly with no other sealers preceding it will greatly intensify your existing color, more so than Cementics Urethane. If applied over Cementics Urethane it will not increase the color intensity any more than the Cementics Urethane already has. You must purchase a base and a catalyst and mix them together. The mix must be allowed to sit 30 min before use, and not left out longer than 4 hours. If, however, you want to store it for later use, you can put it in the fridge. We have successfully stored it that way for about a month or so. Apply Enviropoxy with a rag, or if you are on a larger surface, a paint pad and then smooth with a rag if desired. Two coats are generally best.

Enviropoxy can be purchased from Artisan Finishes or at Kelly Moore. Remember to get the clear version, not the opaque. The clear version looks white when it is wet, and dries shiny and clear.

Special treatment for Enviropoxy: If you don't like the high sheen of the Enviropoxy, and want to reduce it, you must rub it with a scotch brite pad in circular motions until it is even and dull. You may then apply any satin or matte water polyurethane with a brush, rag, or paint pad. No matter what sheen you want, you should always put either Cementic Urethane or water polyurethane over your Enviropoxy to protect it, as it tends to scuff easily. Satin and (sometimes) matte water polyurethane's can be purchased in paint stores, and Scotch Brite pads at Home Depot, and Artisan Finishes as well as other places. Get the Burgundy colored ones. They are also called synthetic steel wool.