



Milestone Finishes

Supplies

Milestone Acrylic liquid
White and/or gray Milestone
#70 grit sand, #1 fine gray sand or other aggregates
Colored glass (if doing recycled glass finish)
#00 grit or smaller

Universal tints
Cementic urethane
¾ inch blue tape
1 ½ inch blue tape
Two 5 gallon buckets
Quart containers (five or six)
Mixing sticks
Drop cloths
Maroon scotch brite pads
#80 grit sandpaper
#120 grit sandpaper
#150 grit sandpaper
Rags
Painter's tray and liners
Rectangular pad and handle
Respirator
Kneepads
Gloves (canvas or leather)
Latex gloves
Rubber cleaning gloves
Safety glasses

Tools

12 inch fiberglass trowel
12 inch steel trowel
10 inch Venetian trowel
Pool trowel
Putty knives, sized as needed
Hock
Bucket scoop
Margin trowel
½ inch drill for mixing
Dry wall paddle
Squirrel cage mixing paddle
(for smooth finish mixes)
Bondo squeegee
Pad sander

Basic Information for all Finishes

Acrylic liquid: An acrylic add mix with Milestone hybridized cement powder makes the resulting finish more flexible, set the color more permanently and increase the resistance to cracking as well as the ability to adhere to surfaces.

Milestone Hybridized cement powder: A Portland cement product created by local Seattle plasterer Don Miles, in the 1980's. He altered or "hybridized" the ingredients of the cement powder with other ingredients to create a more workable color friendly cement finish for creative interior and exterior surfaces. It is necessary to use Milestone acrylic liquid with Milestone powder for the powder to work effectively. Milestone hybridized cement is desirable because of its interesting trowel movement and ability to remain flexible for thin applications, making it more resistant to cracking.

Color tinting: To achieve a specific color for your finish, pre-color your E liquid with universal tints either by eye, or with a formula from the tinting machine at our studio or from a local paint store. Using a formula ensures that your color will be more easily repeatable in the future. Universal tints are usable to tint anything, oil paint, latex paint or cement with acrylic etc. They by nature do not dry when used alone. Always mix them with another medium and try not to spill them! They are very potent and make a huge mess. Stir the tinted liquid with a paintbrush frequently throughout the day, as the tints will settle. If the tinted mix is left overnight, you may need to scrape the bottom of the bucket with a gloved hand as well. This is necessary to keep the color consistent over your entire project.

Coverage per square foot (approximately): We estimate the amount of plaster needed by measuring specific amounts of the acrylic liquid per square foot. Each finish type will vary on this amount. Multiply the amount of acrylic liquid per square foot indicated for your particular finish, by the total square footage of your surface area. Dry ingredients indicated for each finish are an approximation. Generally, two parts dry ingredients to one part liquid ratio is a good start.

Ingredients and mixing: Place the desired amount of colored acrylic liquid in a bucket. You will be adding the dry ingredients to the acrylic liquid a little at a time, only enough to get the consistency desired. Do not add all dry ingredients at once. Stir by hand if mixing small amounts, or use a drill and paddle for larger amounts. Do not mix all of your colored acrylic liquid with the dry ingredients at once. The mix tends to thicken in the bucket as you work, especially in warm temperatures, and you will need extra colored liquid to thin your mix. Mix enough for one area at a time or however much can be used in a couple of hours.

What kind of environment is your finish in? When deciding on a finish you must first consider the environment and type of usage the finish will be withstanding.

Drying time and temperature: Excessive heat or air movement from heaters and fans will affect the color of your finish. Allow it to dry naturally, and avoid direct sunlight.

Plastering applications: There are two basic plaster applications: Wet on wet, and wet on dry.

Multi-color applications: Any of the below finishes can be applied with two or more colors at once, by layering them upon one another in various ways.

Techniques that use these applications:

1. #70/POWDER COMBINATION (wet on wet)
2. TIGHT SKIM OVER BASE COAT (wet on wet)
3. TIGHT SKIM OVER SMOOTH COAT (wet on wet)
4. TIGHT SKIM OVER BASECOAT (wet on dry)
5. SOFT TEXTURE PLASTER
6. SOFT TEXTURE PLASTER MULTI-COLOR (wet)
7. SKIP TROWEL SINGLE OR MULTI-COLOR (wet)
8. VARIOUS SIZE AGGREGATE FINISHES OVER BASE COAT (wet on wet)

Sealers

Note on sealers: Milestone cement finishes do not necessarily need to have any sealers even in outside application but sealers are helpful to prevent stains and even natural patinas from happening. We have found that most water based sealers work well with the Milestone finishes especially those made for concrete, tile grout or stone. Added sealers will give added protection and the desired level of protection can vary according to the application environment and you personal expectations. We do a

variety of projects and we are covering some of the methods we have found to work for our needs. You may want to experiment with your final sealer to make sure you are happy with the level of protection you are getting.

Cementic sealer: A urethane product made specifically for Milestone that helps to resist stains, and creates a low to medium sheen. It also lowers the PH to allow other sealers to work more effectively. It is breathable and allows for moisture to migrate in and out of the Milestone. Alone it can be susceptible to oils and high acid materials. You will need a painters pad, tray, rags a respirator and gloves. APPLICATION: Apply to the surface with your painters pad in round strokes. Avoid linear application as streak marks may occur around overlaps. Apply rapidly and wipe in with a rag immediately as you go. It is best to maintain a wet edge, especially on the first coat. This product needs to be applied thinly and wiped immediately to avoid drips. If needed, apply additional coats for more protection and added sheen. On vertical surfaces always work from the bottom up in order to avoid dripping onto unsealed surfaces.

Carnauba wax: A water soluble wax that helps resist stains and creates a soft surface texture with medium sheen, with mild stain resistance. It is generally applied over Cementic urethane sealer. You will need a painter's pad and handle, a paint tray, rags, a respirator and gloves. APPLICATION: Apply the wax in a circular motion with your pad. Quickly wipe off excess with a rag. Allow the remaining wax to "set" for a few minutes, then buff with a clean rag until shiny. Apply additional coats for added sheen. It is always best to apply the wax over other sealers. The Milestone is almost too porous for the way the wax soaks in. Wax should always be your last sealer and should only be applied after you're satisfied with your overall level of protection.

511 Impregnating sealer: This is a sealer that soaks deep into the cement and is breathable yet greatly prevents water absorption. No sheen. It is best applied in multiple coats over a period of several days.

Sealer combinations based on the type of installation:

Decorative interior walls: 2 coat of Cementic urethane
1 or more coats of Cementic Canuba wax

Decorative interior ceiling: You can leave a ceiling without sealers but if you're doing the walls in the same color, the color of the ceiling will be lighter. We generally advise you to use the same sealers as for a wall.

Hard use interior walls: For kitchen stove areas, counter backsplashes, and bathroom sink areas use the same sealers as for a countertop/shower.

Countertop and shower: 2 coats of 511 impregnator on the first day. Let dry.
1 coat of 511 impregnator on the second day. Let dry.
1 coat of Cementic urethane.
2 coats of Kelly Moore water based epoxy; thin the first coat with 20% water. Let dry between coats. Scotch brite lightly.
1 coat of 511 impregnator. Let dry.
1 coat of Cementic Canuba wax.

Shower floor:	Same as countertop/shower, but don't apply any wax.
Floor:	1 coat of Cementic urethane. 2 coats of Kelly Moore water based epoxy; thin the first coat with 20% water. Let dry between coats. Scotch brite lightly. 1 coat of Varathane.
Exterior Surfaces:	2 coats of 511 impregnator on the first day. Let dry. 1 coat of 511 impregnator on the second day. Let dry. 1 coat of Cementic urethane. 1 coat of 511 impregnator. 1 coat of Cementic Canuba wax.

Getting Started

Note: All finishes are applied over a preliminary sand coat called a brown coat or base coat.

#70 BASE COAT (other aggregate sizes may be used for a base coat): This is a sand and Milestone base coat that is usually applied before your final finish to enhance adhesion, smoothness and workability. With the base coat, we generally use the same colored acrylic liquid as the final finish to make it easier to get consistent cover. Apply this #70 base coat to any smooth, ready to work, surface.

Color: As mentioned above, you will want your base coat to have the same color as your final finish so that it will cover more easily and won't show contrasting colors if scratched or chipped. Exceptions to this rule would apply to a two-color finish where a contrasting base coat is desirable. To achieve a specific color for your finish, pre-color the desired amount of acrylic liquid with universal tints either by eye or with a formula from our studio or a paint store. Using a formula ensures that your color will be more easily reproducible in the future.

Coverage per square foot (approximate) for an average base coat:

1 oz colored acrylic liquid per square foot

1 ½ oz Milestone by volume

1 ½ oz #70 grit sand by volume

The dry ingredients are an estimate, you do not need to add the exact amount shown, add equal amounts of each until you get a smooth flowing mortar.

Ingredients and mixing: Do not mix all your acrylic liquid at once with the dry mix as you will need some left over to thin the mix as you work.

Application: Spread the mix very thin with a 12" steel trowel, as thinly as the sand grit will allow. Press firmly on your trowel, at about a 45-degree angle from your board.

Sanding: When surface begins to dry, you can sand ridges or high spots.

Dry time: Allow surface to dry until dark spots are no longer visible. You are now ready to apply your final finish.

Finishes

TIGHT SKIM OVER BASE COAT (WET ON DRY):

This finish is relatively easy to apply and takes less material than many finishes. It has a lot of movement and color variation, yet is generally smooth to the touch. The sand texture shows through, giving it a rustic appearance. The base coat may be slightly visible under the finish, so you will want it to be the appropriate color for the type of look you want.

Color: To achieve a specific color for your finish, pre-color the desired amount of acrylic liquid with universal tints either by eye or with a formula from our studio or a paint store. Using a formula ensures that your color will be more easily reproducible in the future.

Coverage per square foot:

1/2 oz of acrylic liquid per square foot

1 oz by volume of Milestone per sq foot

Ingredient and mixings: Measure desired amount of E liquid in a bucket and add Milestone powder until you get a mix with a consistency like honey. Do not use all of your colored acrylic liquid in the first mix, as you will need to keep some for re-tempering the mix as you work.

Application: Apply the mix over the base coat, pressing hard at a 45-degree angle with a 12-inch trowel, using either steel or fiberglass. Steel trowels can, at times, leave a dark burnish marks when troweling. If you do not desire this look, use a fiberglass trowel. The finish will have less variation in color and no problems with dark burnishing marks. Do not over trowel the surface as it may tear. Let surface dry for several hours before sanding so it can cure.

Sanding: Sand lightly with #150 or finer grit sandpaper, remove excess dust.

Sealers: Seal according to the location of your installation.

SOFT TEXTURE PLASTER:

This finish is more monochromatic in color, with a smooth slightly textured finish. It has a soft flowing look.

Color: To achieve a specific color for your finish, pre-color the desired amount of acrylic liquid with universal tints either by eye or with a formula from our studio or a paint store. Using a formula ensures that your color will be more easily reproducible in the future.

Coverage per square foot:

1 oz of colored E liquid and approximately

1.5 oz of Milestone powder by volume

Ingredients and mixing:

Tint the Milestone acrylic liquid to color desired. Tint enough to complete the entire job but you can mix smaller batches for each individual surface you are going to coat. Add Milestone powder until you get a mix with a consistency similar to sour cream. Do not use all of your colored acrylic liquid in the first mix, as you will need to keep some for re-tempering the mix as you work.

Application: Hold the 12" steel pool trowel at an almost parallel angle to the surface. Trowel the mix as thinly as possible without revealing the sand coat below. Work at a diagonal in 9" –16" passes from upper right to lower left. The plaster creates more attractive movement patterns if the overlap is applied in random movement patterns. It is wise to work with more than one person troweling on larger surface areas. Keep the edge wet to avoid black trowel marks. Allow drying overnight.

Sanding: Sand lightly with #150 or finer grit sandpaper. Remove excess dust. Seal as desired.

SOFT TEXTURE PLASTER, MULTI COLOR (BLENDED WET):

This is the same technique as the soft texture plaster but using two colors of plaster at the same time. It takes a bit of an artistic eye to mix them on the surface you are coating and get pleasantly flowing color movement as you plaster.

SKIP TROWEL, SINGLE OR MULTI COLOR (WET):

This technique can be used with either the soft touch or the tight skim. The technique consists of simply allowing some of the base coat to show through to the final finish.

RECYCLED GLASS AND/OR SAND AGGREGATE FINISH:

This finish uses a mixture of aggregate (sand and/or glass) and powder to achieve its unique look. This finish is unusual in that it requires an application of two coats applied in a specifically timed manner over each other while still moist. It is smoothed to a flat finish with a specific burnishing technique. The timing of plaster application depends on the temperature of the area you are working in. This is an advanced finish that should be practiced several times on small areas before attempting a full-scale installation.

Color: To achieve a specific color for your finish, pre-color the desired amount of acrylic liquid with universal tints either by eye or with a formula from our studio or a paint store. Using a formula ensures that your color will be more easily reproducible in the future. Color can be tricky with this finish as it is particularly sensitive to temperature and how it is troweled. One must be flexible with this finish.

Coverage for a #00 glass finish or a #1 superfine sand finish per square foot: (By volume)

3 to 4 oz of colored acrylic liquid

6oz of recycled glass or sand aggregate

6oz of Milestone powder

Coverage for # 20/30 silica sand aggregate per square foot: (By volume)

This sand is smaller in grit size, it therefore tend to use less acrylic liquid per square foot than the glass finishes.

2-3 oz of colored acrylic liquid

3 to 4 oz of Milestone powder

3 to 4 oz of sand aggregate

Coverage for a #70 silica or glass sand aggregate per square foot: (By volume)

These sands are smaller in grit size therefore they tend to use less acrylic liquid per square foot than the glass finishes.

1 to 1½ oz of colored acrylic liquid

1-1/2 to 2 oz of Milestone powder

1-1/2 to 2 oz of sand aggregate

Ingredients and mixing: Do not mix all your acrylic liquid at once with the dry mix as you will need some left over to thin the mix as you work. Add the acrylic liquid first and mix with a ½ inch drill and drywall paddle.

Hints on plastering larger areas: On larger areas, spread the first pass of plaster for an area of several square feet. When the first area is ready ("set up" or moist but not soft to the touch), reach in and spread the second coat over the first one. Keep the first coat ahead of the second as you go allowing it to "set up" as you go. You will have to reach in to trowel and re-trowel (burnish) the second coat as it is ready (as it "sets up"). Do not let the edges of your plaster dry as you work. This helps prevent discoloration that can happen when wet plaster is applied over a dry edge.

Timing for plastering: It is important on large areas to have additional people to help. One person will spread the first coat and a second one will apply the second coat to keep the wet edge and will reach back and make sure all areas get burnished as

needed. It is necessary to have a third person in charge of mixing and cleaning tools for large jobs.

Applying your first coat: Be sure the first coat has enough acrylic liquid in it to sufficiently wet the substrate, for a good saturated bond. Apply a thin coat of the mix over the surface, using a 12 inch steel trowel. Press hard enough on the trowel that the size of the aggregate sets the thickness of your plaster application. Chatter marks as you trowel are expected at this point. Overly thick areas on your first coat will create uneven drying time and make the second coat difficult to trowel evenly. This will affect the outcome of your finish.

Second coat: Timing for the second coat is important. You want the first coat to set up enough so that it is very firm to the touch. When you apply the second, the first coat needs to be soft enough so the second coat has a surface to push into. It is important to keep this coat even and thin as well. Keep wet edges wet as you trowel. As this coat hardens you will burnish it.

Burnish: Burnishing is a technique in which we trowel and re-trowel the surface as it hardens, creating a smooth evenly troweled look. It is attained by allowing several minutes to pass between each trowel (depending on temperature and other condition). We use a clean 10-inch Venetian trowel to do this technique, taking special care to clean it between every trowel. A dirty trowel will tear your finish and leave scratches as you trowel. If your timing is good, the surface will lay flat and porous holes in the surface from the aggregate will diminish, though inevitably some will remain. If this coat is applied to soon and troweled too much, blisters may appear. If blistering occurs, stop troweling that area. Blisters are small bonding problems from over-troweling and troweling to soon over the base application. Wait until the surface has gotten quite hard then you can re-trowel the blisters to lay them down.

Sand: Let the plaster completely dry usually over night and sometimes even longer. When completely dry, sand the surface with #120 grit sandpaper, by hand. Remove excess dust.

Seal: Apply one or two coats of Milestone Cementic sealer with pad and tray, and wipe off excess with a rag. Let dry between coats and before proceeding with other applications.

SLURRY: (Recommended for countertops and floors but not necessary in every application)

The slurry is a thin mix of colored acrylic liquid and either Milestone cement used to fill any porous holes left by the aggregate in the surface as you troweled. The slurry smoothes the surface and makes it more desirable for counters and floors. For a rustic look on walls or fireplaces, the slurry can be eliminated. Slurries can be made the same color as the finish, or a totally different color for a unique look.

Formula: You will need only a small amount of colored acrylic liquid per sq foot. An ounce will cover about 4 or 5 sq feet. Add enough Milestone powder (no aggregate) to make a thin mix the consistency of thin honey.

Ingredient and mixings: Stir ingredients by hand. You may need to thin it as you work, so keep some extra colored acrylic liquid available.

Application: Make sure you applied at least one coat of Cementic Urethane before applying the slurry and that that coat is dry. The slurry is most easily applied with a plastic bondo squeegee and a putty tray. Wet a 2-3 sq foot area of your surface with water on a rag. It will dry fairly quickly and you will need to re-apply. Apply the slurry with a plastic bondo squeegee to a small area (8-12 inches). Wipe the surface *hard* and vigorously with a dry rag after each application to remove as much slurry as possible. You want the slurry to remain only in the porous areas of the surface. Be sure to keep the overlap areas of your slurry moist with your damp rag to avoid dry edges and the resulting

overlap lines and stains that could result. If you find yourself struggling with the removal of the slurry, you can use scotch brite pads to clean the surface as well. Be sure to remove all excess slurry! Excess slurry discolors the surface and can look blotchy once sealed, and is very difficult to sand off when dry.

Sealers: Once the slurry is dry, sand lightly if needed with #180 grit sandpaper, often this is not necessary. Apply a coat of Milestone Cementic sealer in the above method and let it dry. Proceed with the final sealers appropriate for the location and type of use your finished project will be exposed to.