VERSACRETE CONCENTRETE POLYMER
Recommendation Guide

PRODUCT DESCRIPTION

VERSACRETE is a concentrated polymer latex admixture designed to improve the overall performance of cementitious stamping mortars and concrete blends which are used for microtoppings and stampable overlays. VERSACRETE will improve adhesion, strength, workability, and water retention of properly formulated cementitious blends.

GENERAL CAUTION

VERSACRETE is a concrete admixture, intended for use in properly formulated cementitious systems. Overall mortar performance is related to the proper formulation, use, and application of the VERSACRETE, water reducers, cement, silica and fillers. Versatile Building Products Inc. makes no warranty regarding the use of this product since the mortar blending is beyond Versatile Building Products Inc. control.

PRIMER OPTIONS

Two Primer methods can be used, choose one of the following methods:

A. (*Recommended)* The 4100 epoxy primer will provide the best adhesion and prevent most failures caused by high MVE (moisture vapor emissions) levels. Adhesion testing conducted by the VBP lab show that the 4100 primer method outperformed the latex and slurry type primers in all tests. As a general rule use the 4100 primer whenever possible.

B. The slurry primer can be used on those jobs that have good surface profile and do not show any signs of MVE.

COVERAGE RATES AND PACKAGING

Coverage rates vary with individual use. For assistance in determining coverage rates for specific uses, contact a Versatile Building Products representative. The rates below are typical based on recommendations in this guide.

VERSACRETE SLURRY-PRIMER

Thickness	5-Gallon Pail
1/16 inch	1000 ft

VERSACRETE GROUT POWDER

Thickness	5-Gallon Pail
1/16 inch	750-1000 ft

EPOXY PRIMER

4100 EPOXY PRIMER	375 ft/Kit	Sold in 1.5-Gallon Unitized Kit

VERSACRETE STAMPABLE MIX

Thickness	5-Gallon Pail
1/4-inch	250 ft
3/8-inch	187 ft
1/2 -inch	125 ft

METAL LATHE MORTAR MIX

Thickness	5-Gallon Pail
Over 1.75lb Metal Lathe	360 ft

20420 S. Susana Rd
Carson, CA 90810
Tel: (800) 535-DECK Fax: (310)-632-6516
www.deckcoatings.com www.garagecoatings.com

VERSACRETE MORTAR BLENDS Starting Point Blends

Slurry Mix Design (50 lb. mix)
Federal White Portland Cement 25 lb
#90 Silica 25 lb

Grout Powder Mix Design (50 lb. mix)
Federal White Portland Cement 25 lb
Silica Flour (200 mesh) 25 lb

Stamp Mix Design (50 lb. mix)
Lehigh Portland Cement12.5lb
Clean Washed Silica Sand
#16 or #20 12.5lb
#30 12.5lb
#60 12.5lb

Microtopping Mix Design (50 lb. mix)
Lehigh Portland Cement 17lb
Clean Washed Silica Sand
#60 17.5lb
#90 13.5lb
For creamier feel add 6oz. Durative MTW

Metal Lathe Mortar Mix Design (50 lb. mix) Covers 30 sq ft per mix
Type III Portland Cement 12.5lb
Clean Washed Silica Sand
#30 25lb
#60 12.5lb

LIQUID RELEASE (watermelon fragrance)

Thickness		5-Gallon Pail (18.9 liter)
3-4 mil		750 ft (21.24m)

TINT VIAL	1 vial per bag	Sold in individual packages
FINISH RESIN (color coat)	75-110 ft/gallon	Sold in 1 & 5-Gallon Units
VERSAGLAZE (clear coat)	100-150 ft/gallon	Sold in 1 & 5-Gallon Units

SUBSTRATE REQUIRMENTS

Concrete
Concrete shall be structurally sound and stable. Concrete shall be free of dust, dirt, grease, contamination, surface laitance, and other potential bond-breaking substances that could impair adhesion. Concrete may need to be mechanically profiled and prepared by shot-blasting, grinding, or other means of scarification. Substrate and ambient temperatures must be adequate for proper hydration of the cement to occur (typically 55°F, 12°C.) Environmental conditions must not be near the dew point during installation of VERSACRETE based mixes.

Other Substrates
Consult with a Versatile Building Products representative for recommendations over other substrates.

PRIMING
A. 4100 Method
Mixing
Mix 2 parts by volume 4100 PRIMER A-Component with 1 part by volume 4100 PRIMER B-Component for 2-3 minutes using a jiffy-type mixing blade at no less than 400rpm. Transfer mixed material to a second mixing vessel and mix an additional 30 seconds to ensure that material along the sides of the first mixing vessel have been properly incorporated into the mixture.

Application
Apply mixture to the substrate using a brush, roller, or squeegee at a uniform coverage rate of 250 ft per mixed gallon. Use spiked shoes when walking into wet material.

Apply 4100 as listed above and then broadcast to refusal #30 sieve silica sand over the wet 4100 and allow it to dry. Remove all loose sand. Verify that the dried material has a sandpaper finish and then proceed with application of topping. ****If concrete is extremely porous, sand may not stick to the initial application of 4100. If sand does not fully adhere to first coat then a second application of 4100 and silica sand broadcast will be required to those areas. DO NOT PLACE THE 2050 or 2051 MORTAR OVER NON SANDED 4100, THIS WILL RESULT IN DELAMINATION!***

Cure Times
4100 can typically accept 2010 Mortar Placement 16-24 hours.
(Note: Cure time is effected by environmental conditions. Do not force dry. High humidity and/or low temperatures can cause haziness and blushing in the coating. Material has a pot-life of 90 minutes based on an insulated 200 gram mass at a starting temperature of 77°F. ***Warning: Large masses of mixed and/or heated material will have a shorter pot-life***.)

4100 CLEANUP
Immediately cleanup splatter marks and tools with lacquer thinner. Clean hands and exposed skin with mild soap and water, and/or citrus based hand-cleaner.

B. Slurry or Grout Coat Method
Versa-Crete Liquid Mixture Ratio per Ratio per 50 lb. mortar mix

Water	1 pail
VERSACRETE	1 pail

Add approximately 2.5 to 3 gallons of the Versa-Crete liquid mixture to a 50 lb blend of slurry or grout powder.

Using a jiffy-type mixing blade at a maximum of 700 rpm, mix the Versa-Crete liquid mixture with the mortar by first pouring the liquid into pail and then adding the powder to it slowly. Mix for 3-5 minutes until a smooth lump free mixture has been reached.

Primer or Grout Coat Application
Apply cement mixture to the substrate using a soft bristle push broom, brush, roller or squeegee. Lightly scrub the cement mixture into the concrete while spreading. Apply at a coverage rate of 100-200 ft^2 per mixed gallon of slurry. Do not puddle. Allow mixture to dry .5-1 hour before applying stampable overlay or allow to dry 2-6 hours before applying microtopping or subsequent primer coats. Additional primer coats may be necessary over highly porous concrete. Re-apply cement mixture if topping has not been placed over it within a 24 hour period.

MORTAR BLENDING
VERSACRETE is a concentrated polymer latex admixture, and requires combination with an appropriate amount of water, and pre-mixed mortar blend to produce a suitable stamping mortar. A sample formulation is included in the above section, however the performance of the mortar is highly related to local ingredients, and a trial mix should be made prior to actual work. We make the following recommendations, without warranty:

- Use a high quality portland cement
- Use clean, dry silica graded from U.S. Sieve #16-#90
- A water reducer is highly recommended to produce sufficient slump without increasing water demand
- Fiberglass fibers can be used to disperse shrinkage forces
- Use caution if accelerators and/or retarders are being used
- Pre-mix all dry components
- Pre-mix all liquid components
- Use clean, potable water
- Adding to much water can cause cracking

MORTAR MIXING
Stamping Mortar Versa-Crete Liquid Mixture Ratio per 50 lb. Mortar Mix 2.5:1 **
Example: Mix the following together

Water	2.5 pails
VERSACRETE	1 pail

Then add approximately 1 gallon of the mixture to a 50 lb blend of stamping mortar or Versatile's Packaged 2010 Stamp Mortar Blend. ** This is for ¼-inch to 3/8-inch overlays use a 3:1 ration for ½-inch overlays,

Avoid over wetting the mix or you may get fine shrinkage spider cracking.

Small Jobs
Add approximately 1 gallon of the Versa-Crete liquid mixture to a 50 lb blend of stamping mortar or Versatile's Packaged 2010 Stamp Mortar Blend. Using a jiffy-type mixing blade at a maximum of 700 rpm, mix the Versa-Crete liquid mixture

with the mortar by first pouring the liquid into pail and then adding the mortar to it slowly. Mix for 3-5 minutes until a smooth lump free mixture has been reached.

Large Jobs
For larger quantities, a portable cement mixer or mortar mixer may be used. Add Versa-Crete liquid mixture and integral color to the mixer first, and then slowly add the dry mortar powder. Allow material to mix for 2 minutes or until the mixture is a uniform lump free consistency. Do not overmix or entrain air into the mixture.

APPLICATION OF VERSACRETE STAMPING MORTAR

Spreading
Pour the mortar mixture into the application areas and spread using a float trowel, gauge rake, or screed box to a uniform thickness at least twice the depth of the deepest portion of the texture mat profile. Using a pool finishing trowel or similar tool, smooth the mortar sufficiently enough for the texture mats to evenly impression the surface. Do not over-trowel the surface or attempt to achieve a perfectly flat finish.

Stamping
Allow the stamping mortar to set sufficiently enough to support the weight of the texture mats and applicator without excessive movement, while still maintaining enough plasticity to accept the texture.

When the mortar is ready to be impressioned, spray the surface of the mortar, and the texture mats with the Liquid Release. Carefully lay the texture mats on the mortar and firmly press into place. Carefully walk over the texture mat, or lightly tap using a stamp-pounding tool. Lay mats out carefully one next to the other if a jointed pattern is being used. Lay out the mats in an overlap fashion if a seamless texture is being used. Pick up the texture mats carefully by pulling up the corner first to break any suction between the mat and the mortar.

When texturing near walls and obstructions, use a floppy texture mat, or touch up skin to impression the mortar as close to the edge as possible. Texture joints can be extended to the wall completely using a blunt straight edge such as a large chisel, or a textured joint rolling tool.

Touch-Up
A small amount of squeeze up between the texture mats is expected, and can be easily remedied by scraping the excess mortar and touching up the joint using an appropriate tool.

Occasionally, small air pockets may become visible after texturing the surface. The air can be relieved by gently punching a relief hole in the bubble using a small finishing nail. The puncture mark can then be covered by impressioning the surface with a touch-up texture skin.

Wet areas that have been stamped too early can be touched up with a texture mat once the mortar has set up sufficiently to accept the texture.

Stopping Work
Impression the mortar as close to the stopping point as possible in whole texture mat increments. Leaving the texture mats in place, cut back the excess stamp mortar along the edge of the texture mat. This will leave a clean cold joint to work off of when work recommences.

If the texture mat has no jointed edges, a straight edge can be used to cut back a clean joint.

Re-Starting Work
Mask the edge of the previously finished work before beginning. If desired, place a divider strip along the egde to produce a clean control joint. Otherwise, pour and spread the new mortar flush with the existing mortar and commence the operation as before.

Curing
The amount and type of curing required by the mortar is highly dependent upon formulation. For standard portland cement blends of sand and silica, the mortar will normally hardened sufficiently to withstand walking traffic within 10-24 hours.

In hot weather and/or windy conditions, it is important to protect the surface from rapid evaporation, which could result in cracking in the surface of the mortar, as well as excessive overall shrinkage in the mixture.

Clean-Up
Clean tools and equipment with mild soap and water immediately after finishing work. Clean up surrounding areas as necessary with soap and water.

Touch-Up after material has hardened
Squeeze up and similar defects can be touch-up by lightly chiseling and/or dremeling out the effected areas. Large defective areas can be removed and patched in the same manner as a regular application

APPLICATION OF METAL LATHE MORTAR
Metal Lathe Mortar Versa-Crete Liquid Mixture Ratio per 50 lb. Mortar Mix 2:1 **
Example: Mix the following together

Water	2 pails
VERSACRETE	1 pail

Then add approximately 1.25 gallons of the mixture to a 50 lb blend of metal lathe mortar ** This is for use when shipping costs are too high for Metal Lathe Cement. Use this blend in place of Metal Lathe Cement for the Versa-Deck Plus System. Apply in same manner as Metal Lathe Cement as shown on the Versa-Deck Plus installation guide.

APPLICATION OF MICROTOPPING
Versa-Crete Liquid Mixture Ratio per 50 lb. Mortar Mix 1:1*

Water	1 pail
VERSACRETE	1 pail

Then add approximately 1.25 to 1.5 gallons of the mixture to a 50 lb blend of microtopping powder or Versatile's Packaged 2050 Microtopping Blend. *Do not apply the microtopping thicker than 1/8-inch or cracking may occur.

Chatter Mark Troweled Micro Finish
Apply 2 coats of microtopping to the floor by troweling the material tight to the surface using a wide sweeping motion. Squeeze the material tight to the surface with each pass of the trowel causing the material to be spread at the depth equal to largest grain of silica sand in the mixture. Use irregular trowel motions so the resulting chatter marks are not uniform. Sanding of the microtopping before sealing may also be done to knockdown the highpoints left. Using a floor buffer with sanding screens works well.

Mottled or Weathered Look Smooth Micro Finish
Apply 1 coat of pigmented Grout Powder over the dry microtopping done above. Then burn the material tight to the surface by using moderate pressure on the trowel. Use wide sweeping trowel strokes while trying not to maintain a uniform pattern. When done properly this can create a very unique effect. Sanding of the Grout Powder before sealing is also possible and this technique can bring some of the base color up to the surface. Using a floor buffer with sanding screens works well.

Standard Texture Application
Apply Microtopping Texture mixture by trowel, hopper gun, roller or brush as necessary to achieve desired finish. Allow material to cure to a dry state before applying additional coats.

Knockdown Texture Application
Apply the Microtopping Texture with a Hopper Gun using 12-20 LBS of pressure. Use the large diameter setting on gun and large orifice. Spray Microtopping so rounded blobs up to the size of a nickel form on the surface. Be sure to achieve 100% saturation to ensure uniform color. Allow 2050 to set up to a semi rigid state. Flatten tops using a Pool Trowel to obtain the desired Knockdown Finish. Use spiked shoes when walking out onto the wet texture is required. Keep Pool Trowel clean by repeatedly wiping down with water.

Taped or Pre-Fabricated Template Finish
Apply Microtopping material as listed above. When dry place grout tape, strips or pre-fabricated template over surface in desired pattern. Apply Microtopping Coat over surface by trowel, hopper gun, roller or brush. Allow material to dry 4-24 hours. Use a rubbing stone over surface when dry to pre-wear and remove high spots. If desired, sponge VERSA-STAIN over tops of texture to create a natural stone appearance. Remove tape or template from surface.

Scored Finish
If cracks will be incorporated into the final design, open up cracks to desired width by scoring with a Diamond Blade Crack Chaser. Apply Grout material as listed above making sure ***not to*** fill crack flush with surface, allowing crack to remain visible after Grout Material is dry. Apply Textured Coat as listed above. When dry, use a chalk marker and draw a pattern onto the textured surface creating a flagstone or other design. Incorporate cracks into design. Score lines into the textured coat at chalk lines using the diamond blade crack chaser. Stain surface entire surface with Versa-Stain or Etch-Stain allowing it to collect into the scored lines. Highlight areas of pattern using a sponge to obtain desired finish.

SEALING
Apply 2 coats of sealer, rolling the second coat at a right angle of first coat. Use a "Wet Look" Sealer if a darker finish is desired. Standard sealers typically used are; VERSAGLAZE Clear or Pigmented FINISH RESIN. Refer to appropriate sealer installation guide for proper procedure. Consult VBP on use of other suitable sealers.

STAINING and ANTIQUEING
Once the mortar has hardened sufficiently to accept foot-traffic, the surface may be stained or antiqued to produce highlights and a natural looking finish. Refer to the VERSA-STAIN Installation Guide for Detailed instructions on staining the surface.

GENERAL MORTAR RECOMMENDATIONS & CAUTIONS
- Observe hot weather concreting practice as necessary
- Do not retemper set material
- Do not overwater
- Honor control joints and expansion joints
- Cracks in substrate may reflect through mortar
- Always add powder to liquid when mixing
- Use chilled mixing water when more open time is needed
- Coverage rates may vary.
- Intregal color will vary with different environmental conditions
- Intregal color will vary with different cement batches, and water to cement ratios
- Always wear protective clothing and equipment as required by OSHA and as necessary.
- Read Material Safety Data Sheets before commencing work.