

URETHANE CONCRETE SLURRY 301-SLB, 401HFB w/ ROLLED-ON TOPCOAT

GENERAL RULES for Working With Cement Urethane Mortars/Slurries

1. Normally, no primer is necessary on a properly prepared substrate, however, if concrete outgassing occurs, discontinue application and apply a suitable primer.
2. Never apply a Urethane Cement material OVER TOP of PARTIALLY cured Urethane Cement (PumaCRETE 300/400 series). This includes drips on floor, or acetone spills. (flooring may bubble and crack over these drips/spills).
3. All Puma-Crete cement urethane materials must be dry to touch, before applying another layer.
4. There is a 24 hr. re-coat window for chemical bond/adhesion for each layer of the system (unless the floor has a sand/rough texture, which provides for a mechanical bond). Otherwise, *grinding/sanding shall be required, prior to the next coat.*
5. Maximum installation thickness of cement urethanes- ¼"-inch maximum (unless extended w/ 1 to 2 gal of pea-stone OR sand per mix). Otherwise you may experience bubbles/cracks when curing.
6. NEVER LEAVE MIXED POLYMERS (MORTARS or LIQUIDS) sitting in PAIL. POUR OUT IMMEDIATELY. ALL mixed MORTARS and epoxy topcoats start a chemical reaction, and build up heat when in the pail. Once poured and spread, working time is extended.

WATER or CHEMICALS (DRIPS, SPILLED or SPRAYED) DURING/AFTER INSTALL

1. PumaCRETE cement urethanes are water based. They can be applied over lightly damp concrete (not saturated or standing water).
2. Water can be spilled/leaked onto PumaCRETE Immediately after application without any harmful effect. (Unless it is sprayed under high-pressure).
3. PumaCRETE floors may be stained by certain chemical spillage, if it is spilled before fully hard/cured (7 days for full chemical resistance).

TEMPERATURE/CLIMATE CONTROL

Condition the materials and work area to 70 degrees if possible. *If working in a cool environment (<70 deg F), warm the materials to 80 deg.F if possible. For areas over 80 deg F, cool materials below 70 deg F. prior to use. This shall extend working time and increase ease of application. MINERAL SPIRITS (for HOT or COLD FLOORS or MATERIALS). Use up to 8 fluid oz per unit of cement-urethane slurry ---SLOWS CURE in Hot climates, and & helps with flow/Leveling on cold floors.*

WORKING IN ACTIVE COOLERS *For new construction, or coolers that have been shut down for > 1 week, there are no special precautions. For all other cases, follow rules below:*

1. Cooling system must be running throughout job and set for 40-45 deg (to maintain dryness of the floor).
2. Do NOT use torches to dry concrete.
3. Keep all outside doors closed.

WARM ALL MATERIAL COMPONENTS OVERNITE (or min 12 hrs.), to 75-80 DEG F, before use.

MINIMUM floor temp for application: 35 deg F (material is WATER BASED, FREEZABLE)

When coating with epoxy at cool temps, do not allow customer to washdown until it is fully hard, or white staining will occur. 24 hrs. to 36 hrs. cure time minimum, at these temps.

PRE-PATCHING HOLES/CRACKS/ROUGH AREAS (if required)

RAPID SET brand products **May be Used for all around PRE-FILLING, PATCHING, SLOPING**

25 LB bag/box, or 55 lb. bags (stocked at Home Depot).

Blue (Cement-All) 9000 psi ultimate strength Apply for small holes and skim coats, from zero to 2 inch thickness
We recommend priming areas with latex concrete bonding agent (by quikrete or sika) for any area less than 1/4 inch thickness.

FOR DEEPER/THICKER AREAS:

Rapid Set- Brown:	> ½ inch	Use for vertical or flat surface	Med size aggregate	7000 psi
Rapid Set- Green:	> 2 inch	Use for deep areas	Stone aggregate	5000 psi

APPLICATION Cement-All *USE OVER BARE CONCRETE ONLY*****

1. Dampen bare concrete surface (use sprayer, spray bottle or masonry brush) Saturated, Surface Dry -- *NO PUDDLES*
(Apply primer coat of latex concrete bonding agent, if less than ¼ inch thickness)
2. Mix 4 parts Cement-All to 1 part cold water.
3. Screed and trowel finish smooth. (Puma-Crete floors/coatings shall adhere to cured material, without abrading/profiling)
4. Over 1/4 inch thickness, you must spray with cool water while it is curing, to keep material cool and prevent cracking.

CURE - 30-60 min at 70 deg F. Surface will lighten in color as it dries.

STEP by STEP APPLICATION INSTRUCTIONS (301-SLB or 401-HFB slurry base coat)

Breaks, stoppage and slowdowns during the middle of the pour will affect final results. Bathroom breaks should be prohibited during the pour, and once started, work should continue at rapid pace until the section is completed.

- 1) **PLAN OUT EACH POUR/SECTION FOR SLURRY/BROADCAST:** Before starting pour, you need to layout the plan for the pour. In general, do not pour material in “strips” wider than 15’ (unless you are very experienced and have proper manpower). Install 12” wide kraft paper with tape, along any edge that will connect with another pour. This will leave a ¼” edge when the tape is pulled, after completion of the pour. Cover drains/cleanouts and anything that needs to be protected from dripping material. Protect walls with painters plastic as needed.
- 2) **MIXING: SLURRY/BASE COAT** (packaged in pre-measured 3-component kits). * *Dust Mask Recommended*
Pour the RESIN component into a five gallon pail or mixer. To pigment the base coat, add one scoop (1.5 oz) of the powder pigment to the RESIN (or 6 oz of the PumaCOLOR liquid colorant), and mix about 15 seconds using a 1/2" chuck drill and jiffy-type mixing paddle. Next, add the hardener. Gradually add all of the contents from the 25-lb white aggregate/filler bag, and blend thoroughly until all liquid is absorbed and there are no chunks of powder. This will usually take about 1 minute.

Pigmenting the Slurry Coat

Powder/tint

GRAY or BLUE floors: add ½ oz (1 scoop) per kit--Black tint

RED floors: add 1.5 oz (1 scoop) per kit--Red tint

PumaCOLOR (liquid tint)

Add 6 oz liquid PumaCOLOR tint, per kit

- 3) **PRODUCT APPLICATION:** Next, pour/apply all of the material in the pail onto the floor, immediately after it is completely mixed. Pour material out of the bucket in a 6-8 inch wide ribbon, across the floor. Spread material at desire thickness, using a cam rake, flat trowel, or notched trowel (1/8" for a 3/16 finished floor; 1/16" for an 1/8" finished floor). Keep a “wet edge” throughout the process. Apply abutting mixes within 5-7 minutes to blend in the next mix. Roll the material with medium pressure, using loop/textured rollers, to help settle aggregate and level the surface (**DO NOT ROLL TOO FAST OR MATERIAL WILL SPLATTER UP TO 6 ft IN FRONT OF ROLLER, ONTO WALLS and EQUIPMENT**). Keep rolling until surface is a mirror-like finish. Material may be rolled perpendicular or at angle as needed to level the surface.
- 4) **BROADCASTING SILICA** Broadcast to rejection with silica broadcast, into the wet slurry. Floor must be rolled and leveled prior to sanding. It is easiest to broadcast from the side of the floor, rather the “working edge”, since you do not want to broadcast into/onto the “wet edge” of the floor, as it is being finished. Continue to broadcast until no shiny/wet areas remain.
Note: you may hand broadcast “chicken feed” from 1-2 gal pail, use a manual spreader machine, or use a (battery or 110v) power broadcaster for large areas).
Wait 5-10 minutes after floor is “settled”, to broadcast silica. (do not wait more than 10 minutes, or material may not accept/absorb the silica, resulting in a “bald spot” in finished floor.

- 5) **FOLLOWING DAY (AFTER SLURRY/BROADCAST IS CURED)** The seams between pours should be lightly hand stoned to remove any “rough” edges. Light scrape over entire floor to remove any small chunks of material on the surface. Sweep excess silica broadcast sand into piles and place into bags/pails. Vacuum the area.
- 6) **OPTIONAL: SHIPS COVE BASE** 45 degree ships cove (1.5 inch x 1.5 inch) may be installed at this stage (see cove base instructions)

TOP COATING the Quartz-Broadcasted Floor (Lock-Coat)

- 7) **TOP COATING:** The 107-PumaPOXY or coating shall lock in the silica, and improve cleanability. 107-PumaPOXY is a polymeric low odor topcoat, which may be spread with a squeegee, and then rolled evenly, (or simply poured in “ribbons” and then rolled out evenly). 108-PumaSPARTIC (1 hr cure) and 110-PumaLAC (increased chem resistance) may be used (see data sheets for special instructions).
- 8) **COVERAGE:** Apply top coat at rate of square foot/gallon rate of 110 (smooth texture), 125 (light texture) to 150 sq ft per gal (rough non-slip). 107-PumaPOXY and 110-PumaLAC may be thinned with up to 10% acetone, in order to increase working time, and achieve rougher textures. Higher coverage rate (per gal) shall result in rougher profile/texture. e.g.- the thinner the material, and the further the material is “stretched” on the floor, the rougher the texture. 125 sq ft per gal is generally very easy to achieve. However, for rough non-slip, 140 to 150 sq ft shall be required. To achieve this, materials and substrate must be warm, 10% thinner added, and materials poured out in “ribbon” across the floor, and rolled out completely until rollers are dry. Then pour out next mix in a ribbon approx. 2 ft from the wet edge (on the dry floor). This shall ensure that the material is spread as thin as possible.
- 10) **ADDITIVES:**
- COLOR:** If you want to pigment the floor, add 8 oz of PumaCOLOR liquid tint per mixed gal. For very light colors, increase to 12 oz per gal.
- IMPORTANT: ensure colorant is pre-mixed before use, and that all colorant has same batch number (or batches must be boxed together). This shall prevent batch to batch color variation, between mixes.**
- THINNER:** Up to 10% acetone may be added for thinning and extending working time for 107-PumaPOXY and 110-PumaLAC. Always use as little as necessary, since acetone may reduce stain resistance, and increase cure time.
- 11) **MIXING:** Make 1 gal or 2 gal (req. 4 man crew) batches. Pour the part A (resin) into a five gallon pail or mixer. Scrape the thick remaining resin out of pail using paint stick or paint spatula (*do not wipe off the scraper on inside of the mixing pail*).
- Add tint if desired (and if not already pre-pigmented)
 - Add **acetone thinner**, if needed.

- 12) **APPLICATION:**
- IT IS RECOMMENDED THAT AT LEAST 1 ROLLER WEAR SPIKE SHOES DURING THE APPLICATION.**
- Pour/apply all of the material in the pail onto the floor, immediately after it is completely mixed. Pour material out of the bucket in a 6-8 inch wide ribbon, across the floor.
- SQUEEGEE SPREADING:** Spread material using a 18 inch black (Unger brand or equal) squeegee on a pole. Using 18” and 9” paint rollers (3/8” nap), first “wet out” your roller covers in the puddle. Next, roll out the material that has been spread with the squeegee, evenly and until uniform.
- Pour new batch along edge of previous batch, keeping a “wet edge”. **Do not roll into the bead/puddle of material.**

ROLLER SPREADING: If you prefer to apply only with rollers, after the bead of material is poured, roll out the material until it is even and uniform

BACKROLLING:. Once the material has been applied, a roller must cross-roll the material. This final roll will even out any roller lines, drips, uneven areas. This person must be 10-20 ft behind the main rollers.

- 13) **CLEANUP:** For cleaning tools and equipment, use acetone.
- 14) **CURING SCHEDULE:** Restrict the use of the floor to light traffic and non-harsh chemicals until the coating is fully cured. It is best to let the floor remain dry 12-18 hours prior to light foot traffic.
- 14) **FLOOR CLEANING:** Caution! Some cleaners may affect the color of the floor installed. Test each cleaner in a small area, utilizing your cleaning technique. If no ill effects are noted, you can continue to clean with the product and process tested. (See *PumaCRETE Cleaning Guidelines* for more information).

Video Instructions:

Slurry/Base Coat: <https://www.youtube.com/watch?v=cFG1AGEgMIw>

Top Coat / Lock Coat: <https://www.youtube.com/watch?v=XBL-L2O4bSc>

NOTICE TO BUYER: DISCLAIMER OF WARRANTIES AND LIMITATIONS ON OUR LIABILITY

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