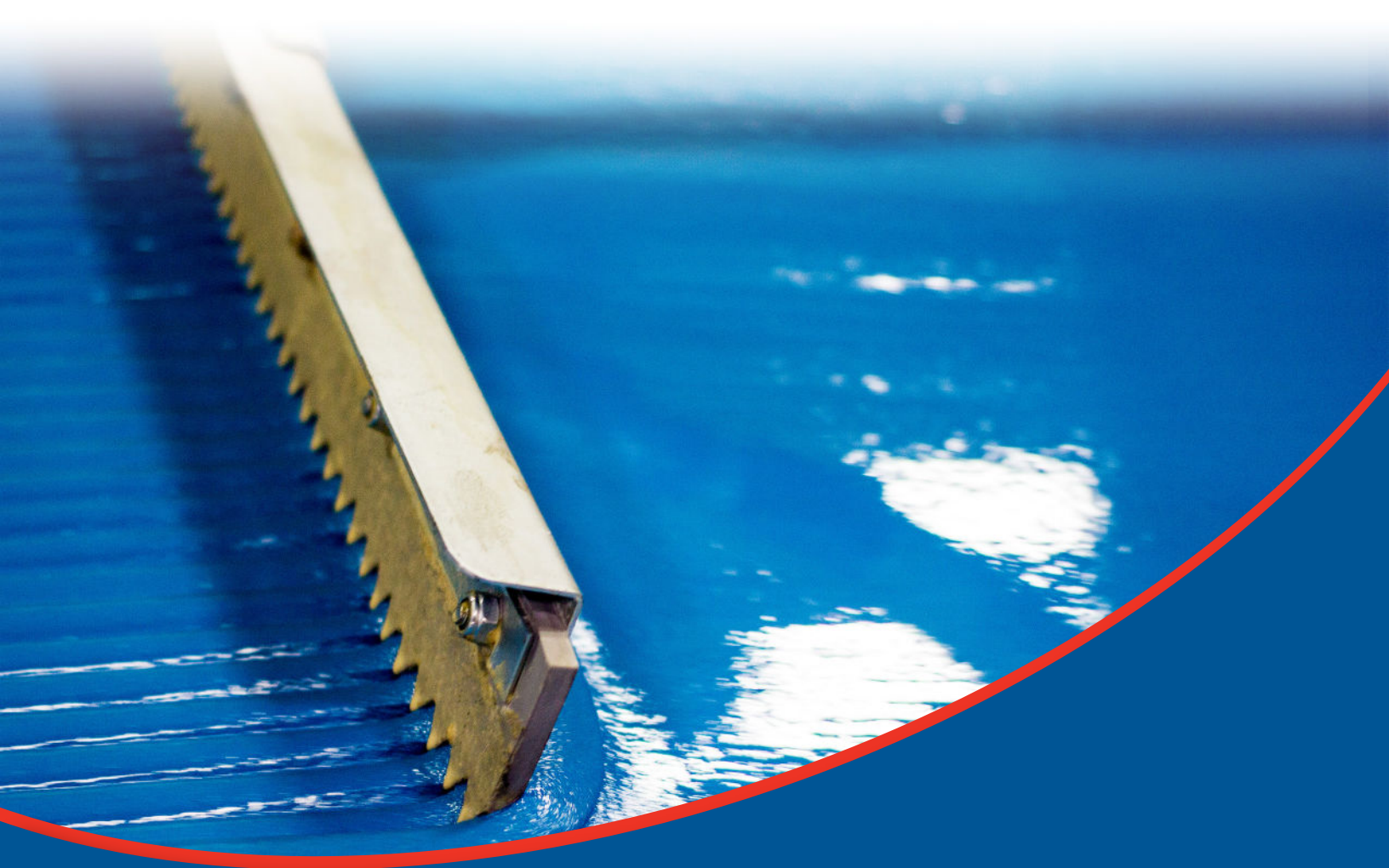




# *CrownCrete-U™*

**URETHANE POLYMER CONCRETE  
APPLICATION GUIDELINES**



## Contents

SOLID COLOR BROADCAST SYSTEM APPLICATION INSTRUCTIONS .....	3
PACKAGING .....	4
BASIC TOOLS REQUIRED .....	5
Storage Conditions .....	9
Surface Preparation .....	9
KEYWAYS (IMPORTANT) .....	9
Dew Point Chart and Installation Area Condition.....	9
Crack and Patching Repair .....	11
Pitching and Sloping.....	12
JOINT GUIDELINES.....	12
Mixing station.....	12
Mix Station Set Up .....	12
Priming .....	13
APPLICATION OF CROWNCRETE U SL, 1/8" Self-leveling.....	14
APPLICATION OF CROWNCRETE-U SG 1/4" SLURRY GRADE .....	16
APPLICATION OF CROWNCRETE U TG, TROWEL GRADE.....	17
CROWNCRETE-U SC, SKIM COAT, PRIMING APPLICATION .....	19
BROADCASTING INSTRUCTION .....	21
SEAL COATs and TOP COATs.....	23
CROWNCRETE U SC, SKIM COAT APPLICATION OVER BROADCAST .....	24
PREPARATION OF PLYWOOD.....	25
PRIOR TO APPLYING CROWNCRETE U SYSTEM .....	25
STANDARD CURE .....	26
LIMITATIONS.....	26
CAUTION .....	26
MOISTURE CONCERNS.....	27



# APPLICATION GUIDELINES: URETHANE POLYMER CONCRETE

This Application Guideline covers the following urethane polymer concrete products manufactured by Crown Polymers:

- **CrownCrete-U 1/8" SL**, Self-Leveling Product No. 818
- **CrownCrete-U 1/4" SG**, Slurry-Grade Product No. 814
- **CrownCrete-U TG**, Trowel Grade Product No. 838
- **CrownCrete-U SC**, Skim Coat Product No. 810
- **CrownCrete-U Cove Base**, Product No. 811

This Application Guideline is intended to provide basic information on the installation of urethane polymer concrete and supporting coating products. It is not intended to be a complete guideline as it is not possible to predict jobsite conditions. Instructions in this guideline are based on normal ambient conditions, at 70°F and 50% relative humidity, over a properly prepared substrate, utilizing customary industry practices.

# SOLID COLOR BROADCAST SYSTEM APPLICATION INSTRUCTIONS

## IMPORTANT NOTICE

CAREFULLY READ THIS APPLICATION GUIDELINE AND ALL APPLICABLE SAFETY DATA SHEETS (SDS), TECHNICAL DATA SHEETS (TDS), PROJECT SPECIFICATIONS, GENERAL GUIDELINES, AND SPECIFICATIONS REFERRED IN THESE INSTRUCTIONS SEVERAL DAYS PRIOR TO STARTING.

CROWNCRETE U STANDARD BROADCAST SYSTEMS HAVE BEEN DESIGNED TO HELP THE INSTALLER, SPECIFIER AND ARCHITECT CHOOSE PRODUCTS FROM THE CROWN POLYMERS PRODUCT LINE TO PROVIDE A TAILORED SOLUTION FOR EACH CUSTOMER'S UNIQUE REQUIREMENTS. CROWN POLYMERS STANDARD BROADCAST IS AN AROMATIC URETHANE POLYMER CONCRETE. IT IS DESIGNED TO BE INSTALLED WITH 1/8" TO 3/8" COATING BROADCASTED WITH NATURAL QUARTZ AGGREGATE, AND SEALED WITH CROWNCRETE U SC, SKIM COAT AND OTHER CROWN POLYMER TOPCOATS.

## PACKAGING



**CrownCrete-U SL 1/8"**  
Self-Leveling  
Product No. 818



**CrownCrete-U SG 1/4"**  
Slurry Grade  
Product No. 814



**CrownCrete-U TG**  
Trowel Grade  
Product No. 838



**CrownCrete-U SC**  
Skim Coat  
Product No. 810

CROWNCRETE U PRODUCT LINE	Description	Part A	Part B	Part C	*Theoretical Yield Per Unit
<b>CrownCrete U 1/8" Self-Leveling Product No. 818</b>	1/8" Self-Leveling	8lbs	8lbs	25lbs	60 sq.ft. @ 1/8"
<b>CrownCrete U 1/4" Slurry Grade Product No. 814</b>	1/4" Slurry Grade	8lbs	8lbs	40lbs	30 sq.ft. @ 1/4"
<b>CrownCrete U TG, Trowel Grade Product No. 838</b>	3/8" Trowel Grade	5lbs	5lbs	45lbs	18 sq.ft. @ 1/4" 12 sq.ft. @ 3/8"
<b>CrownCrete U SC, Skim Coat Product No. 810</b>	Skim Coat	5lbs	5lbs	5lbs	150 sqft @ 8mils
<b>CrownCrete U Cove Base Product No. 811</b>	Cove Forming	3lbs	3lbs	30lbs	30' Linear Feet @ 6" with 1" Radius 40' Linear Feet @ 4" with 1" Radius

\*SUBSTRATE CONDITIONS AND WASTE AT JOB SITE NEED TO BE CONSIDERED WHEN ESTIMATING  
PRODUCT QUANTITY

## **BASIC TOOLS REQUIRED**



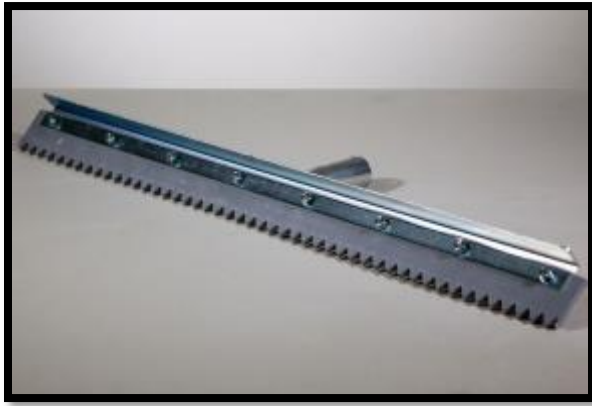
**LOW SPEED HIGH TORQUE DRILL WITH EXTRA CORDS, & 5-GALLON BUCKET FOR MIXING**



**5" JIFFLER MIXING BLADE (FOR SLURRY GRADES)**



**5" HELIX BLADE (FOR 3/8" TROWEL GRADE)**



**1/2" V NOTCHED SQUEEGEE (1/8" SLURRY APPLICATION)**



**PIN RAKE (SET AT 1/4") OR**



**CAM RAKE WITH #3 CAMS (1/4" SLURRY APPLICATION)**



**18" AND 9" COARSE EPOXY COATED LOOP ROLLER (FOR 1/8" SLURRY AND 3/8" TROWEL GRADE APPLICATION)**



**15/16" PLASTIC SPIKE ROLLER (1/4" SLURRY APPLICATION)**



**TROWELS (2" - 3.5"x12" STAINLESS STEEL) AND MINI TROWEL (FOR TROWEL GRADE)**





### **6", 1" RADIUS EPOXY COVE TROWEL**

- Heavy duty spackle knife for wall or smooth thin finishing
- 24" Screed Box (Aids in Trowel Grade larger area installs are optional)
- 12" or 18" Flat Window Squeegee
- 3/8" Nap, Non-Shed Epoxy Grade Roller
- Disposable brushes
- 12" Paint Sticks
- Gloves, goggles, and 3M N95 Dust Mask
- Knee Pads
- Cleaning Solvent

#### **NOTE:**

Do not apply at a temperature below 40°F (C) or above 80°F (C). Do not apply directly to unreinforced sand cement screeds, asphalt or bitumen substrates, glazed tile or nonporous brick and tile, magnesite, copper, aluminum, polyesters, or elastomeric membranes.

*Contact Technical Services for further detail on bonding to these types of substrate.*

## STORAGE CONDITIONS

- CrownCrete-U should be stored dry at 75°F ± 10°F. Exposure of the aggregate to moisture for an extended period will cause lumps.
- Do not allow Part A (resin) or Part B (isocyanate) to freeze prior to installation. If Part A (resin) is frozen, put the container in a warm bath to thaw and allow the liquid to stabilize to room temperature. If Part B (isocyanate) is frozen (crystallized), the isocyanate container must be heated above 100°F to re-melt crystals.
- Part B (isocyanate) and Part C (aggregate) have a six (6) month shelf life from the production date when kept in their original unopened packages and stored at the specified temperature.
- Part C (aggregate) should be as fresh as possible. **DO NOT** use leftover materials from a prior job.

## SURFACE PREPARATION

- Surface should be profiled, clean, dry, oil free and sound. Surface profile should meet or exceed International Concrete Repair Institute (ICRI) Level CSP 3.
- Shot Blasting is the recommended preparation method.
- Keyways are critical and include all drains, installation perimeters, edges, columns, and non-moveable machinery. Doorways should be properly terminated. Keyways for 1/8" Slurry Grade are 1/8" width x 1/8" depth. 1/4" Slurry and Trowel Grade are at 1/4" width x 1/4" depth.

For detailed surface preparation information, refer to CROWN POLYMERS Surface Prep Guideline.

## KEYWAYS (IMPORTANT)

**Edge Details:** Keyway all free edges, doorways, wall perimeter, expansion joints, columns, drains, equipment pads, and termination to other floor systems. Keyways are recommended to control shrinkage and transition to other floor systems. Typical keyways are 1/8" wide by 1/8" deep for 1/8" Slurry Grade. 1/4" x 1/4" for 1/4" Slurry Grade and Trowel Grade. Drain areas are critical and often require flexible joint filling between the drain and the urethane polymer concrete.

*Refer to the Surface Preparation Guidelines for complete details.*

## DEW POINT CHART AND INSTALLATION AREA CONDITION

The dew point is the temperature at which a given concentration of water vapor in the air will form dew. Dew point is the temperature where air must be cooled at a constant pressure and the water content reaches saturation. A higher dew point indicates more moisture in the air while a dew point greater than 20°C (68°F) is considered uncomfortable. A dew point greater than 22°C (72°F) is extremely humid and intolerable.

For example:



DEW POINT	PERCEPTION
52 & LOWER	COMFORTABLE
53-56	SLIGHTLY NOTICEABLE
57-59	QUITE NOTICEABLE
60-63	STICKY
64-69	UNCOMFORTABLE
70+	INTOLERABLE

When installing a floor coating consider looking at the dew point rather than relative humidity. An indicator the air is condensing is when the environment feels very uncomfortable. It is recommended to install flooring when the dew point is 5°F below the surface temperature. A dew point chart is provided showing a relative base temperature. There is no correlation between dew point and relative humidity.

#### HEAT INDEX CHART (TEMPERATURE & DEWPOINT)

Dewpt (°F)	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
65	94	95	96	97	98	100	101	102	103	104	105	107	108	109	110	112
66	94	95	97	98	99	100	101	103	104	105	106	108	109	110	111	112
67	95	96	97	98	100	101	102	103	105	106	107	108	110	111	112	113
68	95	97	98	99	100	102	103	104	105	107	108	109	110	112	113	114
69	95	97	99	100	101	103	104	105	106	108	109	110	111	113	114	115
70	97	98	99	101	102	103	105	106	107	109	110	111	112	114	115	116
71	98	99	100	102	103	104	106	107	108	109	111	112	113	115	116	117
72	98	100	101	103	104	105	107	108	109	111	112	113	114	116	117	118
73	99	101	102	103	105	106	108	109	110	112	113	114	116	117	118	119
74	100	102	103	104	106	107	109	110	111	113	114	115	117	118	119	121
75	101	103	104	106	107	108	110	111	113	114	115	117	118	119	121	122
76	102	104	105	107	108	110	111	112	114	115	117	118	119	121	122	123
77	103	105	106	108	109	111	112	114	115	117	118	119	121	122	124	125
78	105	106	108	109	111	112	114	115	117	118	119	121	122	124	125	126
79	106	107	109	111	112	114	115	117	119	120	121	122	124	125	127	128
80	107	109	110	112	114	115	117	118	120	121	123	124	126	127	128	130
81	109	110	112	114	115	117	118	120	121	123	124	126	127	129	130	132
82	110	112	114	115	117	118	120	122	123	125	126	128	129	131	132	133

Note: Exposure to full sunshine can increase high values up to 15°F

When the dew point is ideal the enclosed work area temperature may be magnified by 10-fold creating a potential health hazard. Observe for dripping/leaky pipes, drain issues, chemicals in the area, type of area installing and the type of concrete it is in.

# CRACK AND PATCHING REPAIR



Typical cracks up to 1/2" x 1/2" can be patched with CROWNCRETE U SG, Slurry Grade, prior to installation. For larger cracks or deeper holes, pre-priming is recommended using CROWNCRETE U SC, Skim Coat. While the primer is still wet or slightly tacky, patch the holes with CROWNCRETE U TG, Trowel Grade. Allow the patched area to harden before continuing with installation. Mix any CROWNCRETE U products as instructed after repair is completed.



## **PITCHING AND SLOPING**

When applying to leveled or sloped surfaces up to 1/4" per foot, the product can be used as supplied. For steeper sloped surfaces, such as ramps that are up to 3/4" per foot, adding 1 gallon of Quartz mesh 25 to CrownCrete U SG, Slurry Grades, will prevent sagging while still providing a uniform surface after pin or loop rolling. CrownCrete U TG, Trowel Grade, does not require adding additional dry and clean sand.

For Example: Floors pitched up to 1/2" per foot, using CROWNCRETE U SG, Slurry Grade, add 1 gallon of mesh #25 quartz (1gallon of #25 mesh is approx. 15 lbs. of sand) to one kit of CrownCrete U SG, Slurry Grade.

In standard pitching of 3/4", 2 gallons of an additional dry and clean sand can be added to CROWNCRETE-U SG, Slurry Grade, or applied with CROWNCRETE-U TG, Trowel Grade to prevent slumping and to complete pitching and finish in one step.

Larger pitching of 1", sloping or repair may be completed by using polymer modified concrete or CROWNCRETE U Cove Base. Substrates may need to be pre-primed with CROWNCRETE U SC, Skim Coat.

## **JOINT GUIDELINES**

*Refer to the Joint Guidelines for complete details.*

## **MIXING STATION**

- Select a convenient mix area as close as possible to the application area and protect the surface from spillage by covering with a layer of cardboard and/or a sheet of plastic. Be generous with the amount of space allocated for this function.
- Do not mix this product in direct sunlight or when temperatures exceed 85°F. Exposure to high temperatures will greatly reduce the working time of this product.
- To reduce potential spills, there must be ample space for mixing personnel.

## **MIX STATION SET UP**

Requirements:

1. 1000 sq.ft. mix station set up.
2. Tape plastic sheet to concrete to avoid any trip hazard.
3. Lay cardboard over the plastic sheet so that the cardboard will serve as an absorbent. Make sure to place the cardboard on top. Always keep the work area neat and clean. Urethane polymer concrete can be challenging to mix; it is



therefore important for the installer to be moving constantly. Always wipe down the mix area immediately after spills.

4. Recommended use is 2 to 5-gallon plastic pails.

Have tools ready at all times when the material starts to build up to minimize any disruptions.

One pail can be used to spin excessive materials off and the second pail to hold solvent to spin clean. This will keep tools clean as the process continues.



EXAMPLE OF A TYPICAL MIXING STATION SET-UP

**IMPORTANT, DO NOT MIX UNTIL THE SURFACE AREA HAS BEEN PROPERLY PREPARED AND ALL PERSONNEL AND EQUIPMENT ARE READY FOR IMMEDIATE APPLICATION.**

## **PRIMING**

Priming or sealing of the substrate is not always required. On oily concrete slabs, detergent/degreaser cleaning is recommended. Very porous substrates or prepared tiles may be pre-primed with CrownCrete U SC, Skim Coat @ 200 sq. ft. per kit (allow to cure for a minimum of 6 hours @ 70°F before proceeding with main application). Any approved concrete sealer as recommended by the manufacturer is also acceptable. Contact technical services for more information.

Unless CrownCrete U TG, Trowel Grade, is being applied, a primer is recommended when concrete off-gas or the urethane polymer concrete are left smooth. CrownCrete U TG, Trowel Grade, is the only product that is self-priming.

*See CrownCrete U SC, Skim Coat, application instructions below if primer is needed.*

## APPLICATION OF CROWNCRETE U SL, 1/8" SELF-LEVELING

1. Installation should be completed in sections to allow full width to be finished in 20 minutes - 70°F or less to ensure absence of placement lines. Be mindful of the temperature condition. If temperature is cooler, the material will react slower. If the temperature is warmer, the material will react faster.
2. Mix only what can be used. Do not mix several units at the same time in one bucket.
3. Each batch covers approximately 15 feet of flooring in a single mix.
4. CROWNCRETE U 1/8" Slurry and all CrownCrete U products are comprised of 3 components, Part A (resin), Part B (hardener), and Part C (aggregate).
5. Each 1/8" SL kit will yield approximately 60 to 62 sq.ft. at 1/8" thick.
6. Pre-mix the Part A (resin) and pour into a 5-gallon pail.
7. Make sure the entire contents of Part A (resin) are completely drained.
8. Add Part B (hardener) to Part A (resin).
9. Mix Part A (resin) and Part B (hardener) using a high-speed drill (800 RPM) with a 5" Jiffler blade type for 30 seconds.
10. Gradually add aggregate and mix continuously for 2 minutes until a homogenous mix is attained. (Move the blade around to ensure the mixture is completely mixed and uniform **THOROUGH MIXING IS REQUIRED**).
11. A properly mixed batch will flow, spread easily, and self-level. Incomplete mixing will result in poor flow, uneven leveling, and lead to an inconsistent finish and possible blistering.
12. Replace mix bucket every 10 batches.
13. Have multiple mixing buckets ready. Multiple batching is recommended to reduce mix time and keep a wet edge.
14. Clean mixing blade and pail regularly to avoid mixing fresh material with older materials. This will further reduce irregular curing and/or blisters.
15. Immediately pour material onto the prepared substrate with a slight delay creating a ribbon effect at approximately 2" wide x 15" length.
16. Pour the entire content onto the floor. Never leave old mix in the bucket as this will start to reduce working time of the new mixture.
17. Use an 18" long 1/2" v-notched rubber squeegee.

18. Spread the material left to right. Do not pull material in random directions. Smoothly spread side to side. When reaching a wall, pull the material from top to down then continue right to left. Continue until there is no material left to spread.
19. Mix as before and pour the second batch of material directly onto the wet edge of the first set. Second batches should overlap the first batch by 2". This will keep wet edges.
20. Immediately begin spreading the material where you left off as iterated in step 9.
21. When the second batch has been pulled to its entirety, begin loop rolling.
22. Use a professional grade loop roll. Typically, an 18" Coarse Epoxy Coater (Lopped Roller Cover), generally blue in color.
23. Back roll with the Loop Roller up and down carefully, repeating several times, without over splattering the material onto a wall or into materials that have already been rolled.
24. Keep pace with the squeegee person. Do not stop roller and do not roll too hard as it may cause over splattering.
25. Do not over loop. Keep tempo and maintain a steady pace. Squeegee and loop rolling should be completed in 5 minutes or less. One mix width should have 5 passes up and down with the loop roller until the end of the batch line.
26. Allow material to relax and settle in place. Do not go back once rolling is completed.
27. Check the V-notched squeegee every 1000 sq. ft. for wear. Adjust or have a new squeegee ready to avoid any unnecessary interruptions in the process.
28. Using a finish trowel or a marginal trowel, trowel edges, drains and around equipment supports with even pressure at a low angle sweeping motion to the proper thickness.
29. Continue mixing and applying as indicated in Steps 4 to 23 until finished.
30. To avoid transition lines between mixes, pour the material directly onto the wet edge immediately after mixing. Keep the material edge as fresh as possible and do not delay, especially in high temperature conditions.



31. CrownCrete-U 1/8" SL, Self-Leveling is now complete and will cure to a smooth low gloss finish.

To leave smooth – priming is required. Go to CrownCrete-U SC, Skim coat for priming instructions.

For broadcasting CrownCrete-U SL, Self-Leveling – go to broadcast instructions.

## **APPLICATION OF CROWNCRETE-U SG 1/4" SLURRY GRADE**

1. The application of CROWNCRETE-U 1/4" Slurry Grade is similar to 1/8" Slurry Grade.
2. Follow the same procedure as CROWNCRETE-U 1/8" Slurry Grade Steps 1 to 28.
3. CROWNCRETE U 1/4" Slurry Grade. Focus on 1/4 " self-leveling in lieu of 1/8" when following 1/8" Slurry Grade procedure.
4. It is the same application step as 1/8" Self-Leveling Steps 4-23.
5. Pin Rake or Cam Gauge Rake as needed.
6. Each kit of 1/4" Slurry Grade yields approximately 30 sq. ft. per unit at 1/4" thick.
7. Set the Pin/Cam Rake at 1/4". For ease of reference use 1 quarter, a nickel, and two dimes = 1/4"
8. To avoid transition lines between mixes, pour the material directly onto the wet edge immediately after mixing.
9. To spread the material, use a Pin/Cam Rake, spread material evenly from left to right (side to side) as described in the 1/8" Slurry Grade procedure.
10. When reaching the wall or end of a batch, pull the material away from the wall in an up and down motion. Same as CROWNCRETE U 1/8" Slurry Grade Application (see Steps 17 to 20, CROWNCRETE U 1/8" Slurry Grade Application). Make sure the material is spread evenly.
11. After spreading is completed, immediately back roll using 15/16" spike roller and roll up and down 5 times moving left to right.
12. Spike rolling should not stop until the termination point has been reached. This will ensure proper leveling and smoothing the aggregate.

13. Spike roll up and down carefully to avoid over splattering the material onto a wall or into the material that has already been rolled.
14. Keep pace with the squeegee person and do not stop the roller. Do not roll too hard as it may cause over splatter.
15. Do not over roll. Keep tempo and maintain a steady pace. Spreading and rolling should be completed in 5 minutes or less. One mix width should have 5 passes up and down with the spike roller until the end of the batch line.
16. Allow material to relax and settle in place. Do not go back once rolling is completed.
17. Make sure to check rakes every 1000 sq. ft. for wear. Adjust or have new squeegee ready to avoid any unnecessary disruptions in the process.
18. Using a finish trowel or a marginal trowel, trowel edges, drains and around equipment supports with an even pressure at a low angle sweeping motion to the proper thickness.
19. Continue mixing and applying as indicated in Steps 1 to 17 until finished.
20. To avoid transition lines between mixes, pour the material directly onto the wet edge immediately after mixing. Keep the material edge as fresh as possible and do not delay, especially in high temperature conditions.
21. Crown Crete U 1/4" Slurry Grade is now complete and will cure to a smooth low gloss finish.

To leave smooth – priming is required. Go to CrownCrete-U SC, Skim Coat for priming instruction.

*For broadcasting CrownCrete SL, Self-Leveling – go to broadcast instruction.*

## **APPLICATION OF CROWNCRETE U TG, TROWEL GRADE**

1. Do not use alcohol or any solvents to add or cut the product for easier troweling.
2. The application of CrownCrete U TG, Trowel Grade, requires the applicator to be on their hands and knees for best placement results. Knees pad are recommended for this procedure.

3. Concrete substrate must be prepared according to CSP 4 or greater for placement of CrownCrete U TG, Trowel Grade. It is a 3/8" thick heavy duty trowel grade material after cured.
4. Each CrownCrete U TG, Trowel Grade unit yields approximately 12 sq. ft. at 3/8" thick.
5. Mix the material as outlined in Steps 6 to 15 of the application for CrownCrete U 1/8" Slurry Grade.
6. To spread the material, pour the entire batch onto the floor or into an epoxy screed box. Never leave old mix in the bucket as this will start to reduce the working time of a new mixture.
7. The screed box should be set at 1/4" or 3/8". The screed box will deliver the material evenly. Pull and finish by trowel.
8. To manually spread the material, use a 3.5"x12" stainless steel finish trowel. Apply even and sufficient pressure at a 30-degree pitch so that the material is evenly spread a 3/8" thickness.
9. Make sure to spread and level the material as evenly as possible.
10. Once the material is spread and leveled, go back over to close any voids and smooth out the finish using a semi-circular motion. Ensure material is at the desired thickness prior to finishing the floor. Using a 3.5"x12" stainless steel finish trowel, hold the trowel at a flat angle with a 5-degree pitch. Using sweeping motions, move the trowel over the material until it is fully closed, leveled and finished. (Make sure the voids are closed and the aggregate is in place and uniformly packed).
11. The finished surface will follow the contour of the concrete substrate. Use a bright light behind the applicator to reveal trowel marks.
12. After the trowel is completed, use an 18" Loop Roller to bring the resin to the surface. Loop rolling removes trowel lines and evens out the surface appearance.
13. Replace loop sleeve periodically to reduce the material from curing onto newly applied areas. Failure to follow these instructions may also leave surface texture variations and surface color shading. Apply minimal pressure to the loop roller.

14. Loop perpendicular to the trowel line to smooth out all trowel marks.
15. Make 5 passes with the loop up and down until the end of the batch. Do not stop once the loop begins, and continue until termination point has been reached.
16. Avoid over splatter when loop rolling onto the wall or into the previously finished material.
17. To avoid transition lines between mixes, pour the material directly onto the wet edge immediately after mixing. Keep the wet edge as fresh as possible.
18. CrownCrete-U TG, Trowel Grade, is now complete and will cure to a low gloss finish. Surface texture will vary.

Trowel Grade is a self-priming, stand-alone system and does not require priming.

For broadcasting into Trowel Grade, make sure to bring up plenty of resin to the surface; then proceed to the broadcast instructions.

## **CROWNCRETE-U SC, SKIM COAT, PRIMING APPLICATION**

Below are the steps for Priming CrownCrete-U SG Slurry Grade when used as a standalone system. This procedure will avoid concrete off-gassing.

1. Pour Part A (resin) into a 2-gallon mix container.
2. Scrape the sides of the resin container with a paint stick making sure no amount of residue remains.
3. Wipe excessive material from paint stick on rim of resin bucket – **DO NOT** wipe excessive material from stick onto the rim of the mixing bucket.
4. Add Part B (hardener), scrape the sides of the hardener container with paint stick and wipe excessive material from the stick-on rim of hardener bucket.
5. Use a high-speed drill with a 3.5-inch Jiffler blade and thoroughly mix Part A (resin) and Part B (hardener) for 30 seconds.
6. To avoid clumping, add Part C (aggregate) slowly while mixing Parts A (resin) and Part B (hardener).
7. Thoroughly and continuously mix all components (Parts A, B, and C) for 2 minutes.
8. Make sure there are no clumps in the mixed materials.
9. Use immediately without delay.

10. The CrownCrete-U SC Skim Coat kit yields approximately 1.5 gallons. Spread rates as a primer over concrete will vary, with typical yields as follows:
  - a. 150 sq. ft. per kit smooth at 8 mils
  - b. 75 sq. ft. per kit smooth at 16 mils
11. Pour the entire mixed material onto the broadcasted open quartz in 4-inch ribbon patterns.
12. Scrape out all mixed materials with a paint stick. Do not leave any residue in the mixing bucket.
13. Wet out 3/8" non-shed nap roller in puddle area prior to using.
14. With an 18" 1/8" v-notch squeegee, pull east to west. Spread the material in a uniform manner.
15. Do not push down on the squeegee too hard. Allow material to leave a deposit.
16. Move squeegee right to left in a smooth and continuous semi-circular motion.
17. Back roll up and down to level the material using a pre-wetted 3/8" non-shed nap roller.
18. Cross roll right to left to eliminate roller lines by overlapping 4-inches in between each cross roll.
19. Do not over roll as it may leave an inconsistent finish.
20. For the second batch follow Steps 1 to 14.
  - a. Pour the 4-inch ribbons 2 inches into the wet-edge.
  - b. Squeegee right to left as before.
  - c. Back roll up and down.
  - d. Cross right to left.
  - e. Overlap 4-inches into prior batch.
21. Skim Coat priming application is now complete. Allow primer to become tack free prior to installing CrownCrete U SG, Slurry Grade.
22. Priming is recommended at 8 mils thickness.
23. 16 mils is recommended for broadcasting into the Skim Coat.
24. Once the Skim Coat at 16 mils thickness is evenly rolled, refer to the broadcast instructions.

25. Two coats are recommended if skim coat is used as a standalone system.  
One coat at 8 mils to seal concrete and the second coat at 16 mils.

## BROADCASTING INSTRUCTION

Broadcast Media: Colored Quartz, Decorative Blend Chips, and Natural Small Size Quartz. Broadcast is done in the same broadcasting technique regardless of the type of media.

1. Once CrownCrete-U SG, Slurry Grade, or TG, Trowel Grade have sat for 10 minutes at 70°F, broadcasting may begin. CrownCrete-U is broadcasted according to the following times and temperatures
  - a. 80°F to 90°F, allow 5 minutes to complete broadcast.
  - b. 70°F to 80°F, allow 10 minutes to complete broadcast.
  - c. 55°F to 65°F allow 20 minutes to complete broadcast.

### Special Notes:

- If media is broadcasted too early the surface may become uneven.
- If media is broadcasted too late, the aggregate may not penetrate the matrix surface.
- If media is broadcasted too late, spiked shoes will leave markings.
- If this happens, repeat the broadcast and consult with technical services.

2. The aggregate must be broadcasted up into the air while dispersing evenly and vertically at an approximate rate as follows:

	Quartz Broadcast	Chips Broadcast
CrownCrete U 1/8" Self-Leveling	0.60lbs per sq. ft.	0.25lbs per sq. ft.
CrownCrete U 1/4" Slurry Grade	0.75lbs per sq. ft.	0.25lbs per sq. ft.
CrownCrete U TG, Trowel Grade	0.50lbs per sq. ft.	0.25lbs per sq. ft.
CrownCrete U SC, Skim Coat	0.30lbs per sq. ft.	0.25lbs per sq. ft.

The media should fall as a sprinkle not in heavy amounts. Broadcast applicators need to stay away two freshly poured mixes behind the wet edge, ensuring the surface is completely covered. Broadcasting should be

completed within 15 minutes of mixing each batch. Observe the temperature as it will affect the material cure rate.

Quartz aggregate is heavy and will sink into the coatings. More quartz will be required if broadcast is done too early. Chips will stay on the top as they are lighter. If applied too early, the chips may sink.

3. NEVER ROLL INTO THE BROADCAST EDGE, ALWAYS STAY AT LEAST 2-3 FEET AWAY FROM BROADCAST.
4. Allow CrownCrete-U to cure for a minimum of 8 hours at 70°F.
5. Remove excess aggregate using a hard bristle brush as shown.



Make sure the brush is a good quality grade to avoid leaving brush color markings on the decorative quartz or chips

Any residual excess natural quartz can be sieved and reused on a future job. Removed chips should not be reused as after brushing they will break and become irregular sizes. Removed color quartz generally loses its luster.

6. Using a high-powered leaf blower may help to accelerate the removal process. Do not over broadcast, as it will result in unnecessary waste cleanup.
7. Once the bulk excess has been removed a quick roughing via pole sanding is needed to knock off the remaining loose or pointy chips.
8. Re-sweep and vacuum up all loose chips generated from sanding and any remaining waste material.
9. The broadcast floor is now complete. Re-inspect the floor carefully to make sure the media is uniform. Lightly rebroadcasting and back rolling can be helpful to fix any deficiencies.

Following is the seal coat of the media.

## **SEAL COATS AND TOP COATS**

The CrownCrete-U product line can yield a full line of Broadcast Systems. Each of the CrownCrete-U broadcast products can be top coated with several Crown Polymers products. To ensure this system performs to its maximum potential, factor in the working temperature, wear and chemical resistance and coating performance requirements.

*Consult with the Technical Service Department prior to making any final decisions to ensure the best custom tailored solution to fit each unique need.*

### **Top Coat Options**

**CrownCrete-U SC** – Urethane Polymer Concrete Skim Coat

**CrownShield** – General Purpose Epoxy

**CrownGuard** – Thick Film Epoxy

**CrownPro** – High-Performance Epoxy, Polyaspartics, and Urethane Top Coats

**CrownClear** – UV Stable Epoxy Top Coat



## CROWNCRETE U SC, SKIM COAT APPLICATION OVER BROADCAST

Based on the top coat finished broadcast applications, begin capping the broadcast with CROWNCRETE-U SC, Skim Coat. The Skim Coat is applied over the natural quartz broadcast only. This is a solid color broadcast system.

1. Pour Part A (resin) into a 2-gallon mix container.
2. Scrape the sides of the resin container with a paint stick making sure there isn't remaining residue.
3. Wipe excessive material from the paint stick onto the rim of the **resin** bucket – DO NOT wipe excess material from the stick onto the rim of the **mixing** bucket.
4. Add Part B (hardener), scrape the sides of the hardener container with a paint stick and wipe excess material from the stick onto the rim of the hardener bucket.
5. Use a high-speed drill with a 3.5-inch Jiffler blade to thoroughly mix resin and hardener for 30 seconds.
6. To avoid clumping, add Part C (aggregate) slowly while mixing Part A and Part B.
7. Thoroughly and continuously mix all components (Parts A, B, and C) for 2 minutes. Make sure there are no clumps in the mixed material.
8. Use immediately without delay.
9. CrownCrete U SC, Skim Coat, kit yields approximately 1.5 gallons. The approximate spread rates over the following textures are as follows:
  - a. 75-95 sq. ft. per kit over 30 mesh broadcast
  - b. 50-65 sq. ft. per kit over 25 mesh broadcast
10. Pour the entire mixed material onto the broadcasted open quartz in 4-inch ribbon patterns.
11. Scrape out all mixed material with a paint stick. Do not leave any residue in the mix bucket.
12. Wet out 3/8" non-shed nap roller in the puddle area prior to using.
13. Pull the 12" or 18" inch squeegee right to left. Spread the material in a uniform manner.

14. When moving right to left, move squeegee in a smooth and continuous semi-circular motion.
15. Once the material is evenly spread, back roll up and down to level the material using a 3/8" non-shed nap roller. Be sure to press down slightly on the roller to ensure material is nestled between the quartz.
16. Cross roll right to left to eliminate roller lines, overlapping 4-inches in between each cross roll.
17. Do not over roll as it may leave an inconsistent finish.
18. For the second batch and so on – follow Steps 1 to 10.
  - a. Pour the 4-inch ribbons 2 inches into the wet edge.
  - b. Squeegee right to left as before.
  - c. Back roll up and down
  - d. Cross roll right to left
  - e. Make sure to overlap 4 inches into the prior batch.
19. Skim Coat is now complete and will cure to a uniform low gloss finish.
20. Allow Skim Coat to cure for 24 hours prior to heavy traffic.

## **PREPARATION OF PLYWOOD**

### **PRIOR TO APPLYING CROWNCRETE U SYSTEM**

1. Plywood should be clean, dry and free of contaminates. Marine grade plywood is recommended.
2. Installations over existing concrete or substrates with potential moisture contamination can be isolated using a polyethylene vapor barrier. All joints should be taped according to manufacturer's instructions. To reduce the risk of excessive dampness, consider raised platforms for airbricks in outside wells.
3. It is recommended to install 2 layers of plywood to offset joints to reduce flexing between joints. Plywood should be at least 3/4" thick.
4. Plywood should be strongly fastened with high quality construction adhesive and recessed screws at 6" on center screw pattern.
5. Joints can be bandage by using a mixture of elastomeric product 100% solids epoxy and treated fumed-Silica by embedding a minimum of 8" of close weave fiberglass matting into the wet resin.

6. All termination key ways should be installed using a Skill type saw with a 1/4" wide blade set to 3/16" deep. (Concrete diamond cutting blades will burn and not cut wood)
7. Using a wood chisel, any drain detail must be keyed a minimum of 2 inches away from the drain edge with the outside exposed edge removed to a slope. key way doorway thresholds to allow a smooth transition for the termination of the material.
8. Make sure plywood is secure and ready prior to installation.
9. Plywood may require sanding.
10. Plywood should be thoroughly vacuumed prior to installation.

## **STANDARD CURE**

Allow a minimum of 8 hours of cure time before light foot traffic at 70°F and a minimum of 24 hours for heavier traffic. Additional time must be allowed for heavier traffic loads at lower temperatures. Full cure time takes approximately 7 days.

*Contact the Technical Service Department for more information.*

## **LIMITATIONS**

Exposure to ultraviolet light and aging will change the color of non-top coated CrownCrete-U.

Sunlight and metal halide lighting will cause yellowing without affecting the performance. Grey or Blue non-top coated CrownCrete-U such as grey will become green.

## **CAUTION**

Follow the Hazardous Materials Identification System labeling guide for proper personal protective equipment and Safety Data Sheet prior to handling any product. Note that CrownCrete-U aggregates contains crystalline (quartz) silica and Portland cement. Use only as directed. KEEP OUT OF THE REACH OF CHILDREN.

Do not reseal moisture-contaminated hardener. This will result in carbon dioxide generation and possible violent rupture of containers.

## **MOISTURE CONCERNS**

Normal limits for moisture vapor transmission for CROWNCRETE U SG, Slurry Grades floor systems are 15 lbs./1,000 sq. ft./24 hour using the calcium chloride test per ASTM F-1869 or 99% relative humidity using in-situ Relative Humidity Testing per ASTM F-2170.

*Please go to [www.CrownPolymers.com](http://www.CrownPolymers.com) for any technical details or call technical services. Not responsible for typographical errors.*