VERSATILE

Roll on Rock®
Installation Guide

SYSTEM DESCRIPTION

ROLL ON ROCK® is a multi-layer decorative epoxy flooring flake system that is designed to provide the look of granite to flooring surfaces while delivering substrate protection. This installation guide provides the installer with one or two-day installation methods along with several clear topcoat options. Roll on Rock is a high build floor coating that is low in VOC and is in compliance with the strictest SCAQMD Rules in the country. It consists of a colored epoxy primer that wicks deep into the concrete floor surface, creating an incredible bond that will be able to withstand up to 8lbs of MVE (moisture vapor emission). Roll on Rock® uses colorful flakes to achieve a beautiful multi-color finish with a high build and ultra-high build clear Polyurea or Polyaspartic Topcoat options that exhibit incredible high gloss while providing extreme chemical and wear resistance.

SYSTEM COMPOSITION

The Roll on Rock® system is a multi-layered application made up of the following components:

PRODUCTS	Coverage Rate *(will vary depending upon the size of flake used)*
1. ***4195 Direct to Concrete Epoxy -*** A pigmented primer and flake basecoat applied to concrete substrates	*150-250 SF per gal*
2. ***41 Accelerator (optional) -*** Additive packs that can be mixed with 4195 to speed up its cure rate for a 1 day install	*1-3 packs per gal*
3. ***Flakes*** - Decorative flakes available in various sizes and color blends.	*400- 500 SF per 50lb box*
4. TOPCOAT CHOICES:	
❖ ***5073 Polyurea*** – A general use high solids clear Polyurea topcoat that exhibits great chemical and excellent wear resistance while providing a deep high gloss surface that can be walked on in as little as 2 hours.	*125-175 SF per gal over 1/16" flake, 200-250 SF per gal over 1/4" or larger flake*
❖ ***OPTIONAL 5205 1st Thin Topcoat for 5073*** – A clear fast-drying primer topcoat that seals the flake and dries fast so the 5073 can be applied over it in 20-30 minutes to create a two-topcoat ultra-high build system. This creates a thicker-looking clear topcoat without the need to come back and apply the 2nd coat the following day.	*150-200 SF per gal over 1/16" flake, 250-300 SF per gal over 1/4" or larger flake*
❖ ***5085 Ultra High Solids Polyaspartic Topcoat*** - A high solids clear Polyaspartic topcoat that exhibits great chemical and excellent wear resistance while providing a high-build & high-gloss surface in one coat that can be walked on in 3-12 hours (3 hours for warmer days and longer for cooler days).	*150-175 SF per gal*

SUBSTRATE REQUIREMENTS

CONCRETE

All concrete shall be clean and bare. 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. All cracks, gouges, and other surface defects need to be addressed prior to coating installation. Substrate and ambient temperatures must be above 35ºF during installation of coating. Relative humidity should not exceed 65% during installation of the coating. Environmental conditions must not be near the dew point during installation of the coating.

Moisture Vapor Transmission of the substrate must not exceed 8lbs per 1000 SF per 24 hours. For high MVT substrates, consult with a VBP representative for recommendations.
If concrete is not porous (does not darken when wet), it must be mechanically profiled and prepared by either shot-blasting, grinding, water-jetting, or other means of scarification to produce a Concrete Surface Profile (CSP) between #2 and #4, according to International Concrete Repair Institute (ICRI) Guideline No. 03732.

OTHER SUBSTRATES
VBP only recommended its Roll on Rock® system for use over concrete. All other substrates are done at the user's own risk.

ADVICE BEFORE INSTALLATION

MIXING PRODUCTS
4195, 5205, 5073, and 5085 are 2-component products, *be sure to mix thoroughly before the application*. Cure times will be affected by environmental conditions. Do not force dry. High humidity and/or low temperatures can cause haziness and blushing in the coating. Large masses of mixed and/or heated material will have a shorter pot-life.
* *Caution: If you are not familiar with the product, Do Not Mix more than 1 gallon at a time. The more you mix, the shorter your pot life (working time) will be.*

****OPTIONAL 41 ACCELERATOR (for one-day installations)***

- 1 pack of 41 Accelerator per 1 gallon of 4195 will provide up to 50 mins pot-life and 6 hrs dry-time at 75°F.
- 2 packs of 41 Accelerator per 1 gallon of 4195 will provide up to 40 mins pot-life and 4 hrs dry-time 75°F.
- 3 packs of 41 Accelerator per 1 gallon of 4195 will provide up to 30 mins pot-life and 2 hrs dry-time 75°F.

Please note that when the pot-life kicks, it will be fast and become unusable very quickly. It is recommended to mix a small amount of material first for cutting in, etc. until you become more familiar with the system performance in your local climate.

HOT WEATHER TIPS
4195, 5205, 5073 and 5085 have a shorter pot life in very hot conditions. Keep the material core temperature around 50-75°F if possible. *Icing the buckets hours before doing job or placing in a cool environment the day before application can help by lowering the core temperature.* If instructions are not followed, excessive heat may cause outgassing, foaming, and hazing of 5085 where it has been applied too thick or where material settles into joints, etc. as well as a shorter pot life. *To reduce the effects of outgassing (vapor coming out of the substrate), install in the cooler parts of the Day or when the temperature is decreasing from the highest temperature of the day.*

COLD WEATHER TIPS
All products are Temperature sensitive, especially the Epoxy (4195). *The colder the temperature, the longer the dry and cure time will be extended.* Adding solvents to the product will also increase dry times.
These products may have higher viscosity or may gel up in very cold conditions. Keep the material core temperature around 50-75°F if possible. *Using a pail warmer hours before installing the materials or placing product in a warm environment the day before application can help increase the core temperature which will make the material thinner and easier to work with.* If instructions are not followed, material may get very thick during mixing which may lead to foaming and hazing of 5085 where it has been applied too thick (avoid puddling in low spots) or where material settles into joints.

INSTALLATION STEPS

1. SURFACE PREPARATION

There are many methods of surface preparation for various substrates, many of which are adequate for this application. Consult a VBP Representative for alternatives to the procedure outlined below, such as methods of correcting problematic and contaminated substrates.

Concrete -

Pour water onto the concrete surface. Inspect area to see if water penetrates concrete (concrete will darken). If the concrete allows water to penetrate and not "bead up" on the surface, then proceed to clean the surface using V-100 concrete cleaner degreaser. Use liberal amounts on oils stains, then scrub until the water no longer beads on stain. If water does "bead up "when doing the penetration test, then the following additional preparation will be needed. Concrete must be mechanically profiled and prepared by shot-blasting, grinding, water-jetting, or other means of scarification to produce a Concrete Surface Profile (CSP) between #2 and #4, according to International Concrete Repair Institute (ICRI) Guideline No. 03732.

2. PREPARATION

- Shut off all sources of ignition prior to work, and throughout the coating process.
- Supply auxiliary ventilation as necessary to produce a safe working environment.
- Use a NIOSH approved respirator capable of filtering organic vapors.
- Always wear protective clothing, gloves, and equipment as required by OSHA and as necessary.
- Because the clear topcoats have such high gloss, be sure to remove dust from areas during application.
- Use a brush, 18" Lint Free 3/8" Nap roller, or squeegee (Magic Trowel works well for 5085 and is preferable) for application.

3. 4195 EPOXY PRIMER APPLICATION

Thinning -

Advantages of thinning 4195 are a lower viscosity which makes it easier to roll and an extended pot-life. 4195 can be thinned with up to a ½ pint of Xylene or Acetone. However, this will slow the cure times.

** Caution: Thinning with Xylene will increase the VOC of 4195 by 55g/L, which makes it non-compliant for residential use in the SCAQMD District. Check your local district rules before using Xylene, otherwise, use Acetone. Solvents are extremely flammable, be sure that all containers are metal, and all sources of ignition have been turned off.*

**Using the optional 41 Accelerator for one-day installs will shorten the pot-life. Be careful of not mixing a large amount if you are not familiar with the product.*

Mixing -

- Material should be at room temperature (50-75°F)
- First, premix 4195 Epoxy A-component for 1 minute using a jiffy-type mixing blade
- Then mix 4195 Epoxy A-Component with 4195 Epoxy B-Component at ratios listed on the label for 2-3 minutes. Slowly add the **optional** 41 accelerators as you mix.
- Transfer mixed material to a second mixing vessel and mix an additional minute to ensure that material along the sides of the first mixing vessel have been properly incorporated into the mixture. Be sure to mix thoroughly.
- 4195 has a pot-life of 60 minute, this is based on 1-gal mass at normal temperature at 75° F. Adding accelerators will decrease pot-life.

Application -

- Working only as much product as you can handle properly whilst keeping a wet edge.
- Begin by cutting-in the concrete footings (Stem Walls) and around the edges with a 3"-4" chip brush or 6" weenie roller.
- Do not work edges more than 15-20 minutes ahead of the main body of the floor. Keep a wet edge.
- Pour a band of the mixed material out onto the floor and begin rolling with a 3/8"-1/2" nap 18" wide roller.
- Work the material evenly to a wet film thickness of 5-10mils (150-250 SF/ 1gal kit).
- Right after laying about 2 kits of 4195 using the same roller, walk back out onto the wet floor (be sure to wear spikes) and back roll (dry roll) the 4195 (this should take no than longer 5 - 10 minutes for a 2-kit area). This will cause the 4195 to tack back up in areas that it may be drying and make the flaking look more uniform. The chips will adhere more evenly to the 4195 when using this method.

4. FLAKE APPLICATION

Note -

Wait at least 15-20 minutes (from 4195 application) before throwing the flakes. When you throw the flakes too soon, you risk the chance of the primer wicking up into the chip as well as the concrete. If this occurs, then the edges of the flake may have a transparent look. Your goal should be to throw the flakes within 45 minutes of the first application of 4195 to the area.

Broadcast Flakes -

- FLAKES should be broadcast into the wet 4195 while the coating still has a high degree of tackiness (15-20 min after applying the 4195).
- Use spiked shoes when walking onto the wet material while broadcasting the flakes.
- Scoop the flakes up with your hand and broadcast onto the wet surface to complete rejection, releasing them from your hand like feeding chickens or throwing grass seed. Disperse the Flakes evenly across the surface.
- Broadcasting to rejection typically means that you will not be able to see the 4195 Epoxy color beneath it.

Flake Recovery -

- Once the 4195 has dried sufficiently, reclaim the loose Flake by sweeping, blowing, and/or vacuum excess FLAKES from the surface.
- Recovered FLAKES may be used on a subsequent job but should be sifted through to remove small broken flake/dirt and debris. Re-Claimed Flakes should be Labeled accordingly.
- Using a Rigid Floor Scraper aggressively scrape the protruding flakes in both directions, front to back then side to side to smooth out the flakes and remove all loose flake debris from the surface. Vacuum and lastly use a leaf blower to clean the floor of excess Flake residue.
- Chipped surface can be lightly sanded if needed to achieve a smoother finished surface is desired
- Don't be afraid to scrape really hard with this system, the smoother you get it, the thicker the topcoat will look when done.

Flaking Tip -

Do the curb walls (Stem Walls) first, mix up a small or partial kit of 4195 and broadcast into that, then sweep up the remaining chips from the floor before doing the field. This is a trick that when done properly will save time and back-breaking energy. Using large flake also reduces the amount of topcoat need since there is less surface area due to the flatness of the chip and less layering of the chip.

5. TOPCOAT APPLICATION

- ***OPTIONAL 5205 FIRST THIN COAT FOR TWO TOPCOAT SYSTEM***

Note -

This process is for those who want a fast and easy to install Ultra High Build Finish. For standard High Build Finishes proceed to the 5073 section below.

Allow the 4195 PRIMER to cure a minimum of 2-6 hours (accelerated) 8-18 hours (standard) before proceeding to the next step. Check hardness by pressing onto the epoxy with a finger, if it leaves a fingerprint then continue to wait until it becomes hard enough to scrape without damaging the epoxy.

Mixing -

- Material should be stored at room temperature (50-75ºF)
- Mix 5205 A-Component with 5205 B-Component at ratios listed on container 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. Be sure to mix thoroughly.
- 5205 has a pot-life of 45 minutes based on a 1.5-gallon mass at 75°F.

** Caution: Unlike Epoxy, this Polyaspartic material has a long pot-life in the container than on the floor (keep the mixed material in pail to achieve maximum working time instead of pouring bands on the floor)*

Application -

- After mixing, cut in edges/curb/stem wall with a 3"- 4" chip brush and or 6" weenie roller.
- Be careful not to make the cut in lines too wide. If the cut in lines are too wide and it takes too long to roll material across, it may start to dry. If you then seal over that it may look darker with now two coats of sealer on it.
- Then pour a 4"-5" even ribbon of 5205 across the floor.
- Use a Lint Free 3/8" nap 18" roller to spread a tight coat of 5205 out evenly so the entire surface is coated.
- Pour out additional ribbons on the surface as needed and make sure to keep a "Wet Edge" at all times. Including along the edges where you are cutting in.
- Walk back onto the wet floor on spiked shoes to disperse any heavy puddles of material that are pooling.
- Keep firm pressure on the roller when spreading.
- Spread the 5205 out evenly and tight to the surface with the roller, back roll the surface as you go while keeping spread rate at 150-200 SF/gal over 1/16" Flake or 250-300 SF/gal over 1/4" flake or larger.
- Allow the material to dry for 30 to 60 minutes and then begin applying the 5073 as listed below.

** Caution: If back-rolled too late or over rolled as the product is setting or tacky, it may cause microbubbles in the coating due to the coating setting up and becoming too thick to release bubbles caused by excessive rolling*

- ***5073 POLYUREA TOPCOAT APPLICATION***

Note -

Allow the 4195 PRIMER to cure a minimum of 2-6 hours (accelerated) 6-18 hours (standard) before proceeding to the next step. Check hardness by pressing onto the epoxy with a finger, if it leaves a fingerprint then continue to wait until it becomes hard enough to scrape without damaging the epoxy.

Mixing -

- Material should be stored at room temperature (50-75ºF)
- Mix 5073 A-Component with 5073 B-Component at ratios listed on container 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. Be sure to mix thoroughly.
- 5073 has a pot-life of 55 minutes based on a 2-gallon mass at 75°F.
  ** Caution: Unlike Epoxy, this Polyaspartic material has a long pot-life in the container than on the floor (keep the mixed material in pail to achieve maximum working time instead of pouring bands on the floor)*

Application -

- After mixing, cut in edges/curb with a 3"-4" chip brush and or 6" weenie roller.
- Be careful not to make the cut in lines too wide. If the cut in lines are too wide and it takes too long to squeegee material across, it may start to dry. If you then seal over that it may look darker with now two coats of sealer on it.
- Then pour a 4"-5" even ribbon of 5073 across the floor.
- Use a Lint Free 3/8" nap 18" roller to spread 5073 out evenly so the entire surface is coated.
- Pour out additional ribbons on the surface as needed and make sure to keep a "Wet Edge" at all times.
- Walk back into the wet floor on spiked shoes to disperse any heavy puddles of material that are pooling.
- Keep firm pressure on the roller when spreading.
- Once 5073 is spread out evenly with the roller, back roll the entire surface, keeping spread rate at 125-175 SF/gal over 1/16" flake and 200-250 SF/gal over 1/4" or larger flake. This will even out the gloss across the entire floor and should be done in the opposite direction of the first direction rolled. Back-rolling should be done within 20 minutes, break off into sections at control joints or have extra installers if the floor is large.
- You will have an open time on the floor of approx. 30 min to back roll the 5073 at 75°F.

** Caution: If back-rolled too late or over rolled as the product is setting or tacky, it may cause microbubbles in the coating due to the coating setting up and becoming too thick to release bubbles caused by excessive rolling.*

Cure Times -

- Coating can typically accept light foot traffic in 2-3 hours depending upon ambient Temperatures, vehicular traffic with pneumatic tires in 24 hours.
- Full cure occurs in 5-7 days.
- Pilot lights and surrounding sources of ignition may be put back into service once solvent vapors have dissipated to a level below the lower explosion limit. Typically, this will take 8-16 hours after floor installation with adequate ventilation.

❖ *5085 POLYASPARTIC TOPCOAT APPLICATION*

Note –

Allow the 4195 Epoxy to cure a minimum of 4-6 hours (accelerated) 8-18 hours (standard) before proceeding to the next step. Accelerators need to cure off or bubbling can occur. Check hardness by pressing onto the epoxy with a finger, if it leaves a fingerprint then continue to wait until it becomes hard enough to scrape without damaging the epoxy.

Mixing -

- Material should be stored at room temperature (50-75°F)
- Mix 5085 A-Component with 5085 B-Component at ratios listed on container 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. Be sure to mix thoroughly.
- 5085 has a pot-life of 55 minutes based on a 2-gallon mass at 75°F.

** Caution: Unlike Epoxy, this Polyaspartic material has a long pot-life in the container than on the floor (keep the mixed material in pail to achieve maximum working time instead of pouring bands on the floor)*

Magic Trowel Application for Faster Installs -

- After mixing, cut in edges/curb/stem walls with a 3-4-inch chip brush and or 6" weenie roller.
- Be careful not to make the cut in lines too wide. If the cut in lines are too wide and takes too long to squeegee material across, it may start to dry. If you seal over that, it may look darker with now two coats of sealer on it.
- Then pour a 4"-5" even ribbon of 5085 across the floor.
- Use Magic Trowel squeegee to spread 5085 out evenly so the entire surface is coated.
- Pour out additional ribbons on the surface as needed and make sure to keep a "Wet Edge" at all times.
- Walk back onto the wet floor on spiked shoes to disperse any heavy puddles of material that are pooling.
- Keep firm pressure on the trowel when spreading.
- Once 5085 is spread out evenly with the squeegee, use a 3/8" Nap 18" Lint Free Roller to back roll the entire surface, keeping spread rate at 150-175 SF/gal. This will help even out the gloss across the entire floor and should be done in the opposite direction you squeegee.
- You will have an open time on the floor of approx. 30 min to back roll the 5085 75°F.

** Caution: If back-rolled too late or over rolled as the product is setting or tacky, it may cause microbubbles in the coating due to the coating setting up and becoming too thick to release bubbles caused by excessive rolling.*

Lint Free Roller Application -

- After mixing, cut in edges/curb/stem walls with a 3"- 4" chip brush and or 6" weenie roller.
- Be careful not to make the cut in lines too wide. If the cut in lines are too wide and it takes too long to squeegee material across, it may start to dry. If you then seal over that it may look darker with now two coats of sealer on it.
- Then pour a 4"-5" even ribbon of 5085 across the floor.
- Use a 3/8" nap Lint Free 18" roller to spread 5085 out evenly so the entire surface is coated.
- Pour out additional ribbons on the surface as needed and make sure to keep a "Wet Edge" at all times.
- Walk back onto the wet floor on spiked shoes to disperse any heavy puddles of material that are pooling.
- Keep firm pressure on the roller when spreading.
- Once 5085 is spread out evenly with the roller, back roll the entire surface, keeping spread rate at 150-175 SF/gal. This will even out the gloss across the entire floor and should be done in the opposite direction you first squeegeed on the product.
- You will have an open time on the floor of approx. 30 min to back roll 5085 at 75^{0}F. Break off into sections at control joints or have extra installers if the floor is large.

** Caution: If back-rolled too late or over rolled as the product is setting or tacky, it may cause microbubbles in the coating due to the coating setting up and becoming too thick to release bubbles caused by excessive rolling*

Cure Times -

- Coating can typically accept light foot traffic in 3-12 hours depending upon ambient Temperatures, vehicular traffic with pneumatic tires in 72 hours.
- Full cure occurs in 5-7 days.
- Pilot lights and surrounding sources of ignition may be put back into service once solvent vapors have dissipated to a level below the lower explosion limit. Typically, this will take 8-16 hours after floor installation with adequate ventilation.

6. CLEAN-UP

- Immediately clean up splatter marks and tools with MEK. Clean hands and exposed skin with mild soap and water, and/or citrus-based hand cleaner.

ADDITIONAL CAUTIONS AND RECOMMENDATIONS

- If concrete is extremely porous a 2nd coat of the 4195 may necessary to hold the flakes.
- If the Primer coat wicked in too deep into the concrete (happens on very porous floors), then the floor may have some bare spots where the flake did not stick. You can use a small amount of clear coat and touch up those areas by Broadcasting Flake on to the bald area. Let it dry, then Re-Scrape before applying the final topcoat to all areas.
- Use a 3/8" nap 18" lint-free roller to help speed up the application.
- Be sure to back-roll the topcoat to ensure a uniform coat.
- Do not allow material to puddle.
- Use accelerators when installing in cold climates or where the return to service time needs to be fast-tracked.
- Mask all areas that need protection.
- Store material at 50-75°F
- Do not force dry any components of the Roll on Rock® system.
- Always wear protective clothing, gloves, and equipment as required by OSHA and as necessary.
- Turn off all sources of ignition and follow safety guidelines listed in product sections.
- Please Read all Material Safety Data Sheets and Individual Product Installation Guides before commencing work.

TECHNICAL SERVICES

- Technical services can be obtained by contacting VBP directly at 714-829-2600.