

SYSTEM DESCRIPTION

Liquid Quartz is an interior grade, multi-component, 100% solids high gloss epoxy flooring system. When installed using the recommended steps, below, the Liquid Quartz system provides a high performance traffic surface with modern, upscale aesthetics. It is an economical, quick-turnaround system enabling faster application using fewer installation steps and man hours, when compared to standard epoxy quartz flooring. In addition, the surface allows for undetectable repair of minor damage when needed. Liquid Quartz offers cost-effective flooring to the residential, commercial, or institutional markets with impressive durability and beautiful designer style. Liquid Quartz is self-sealing and does not require a separate topcoat, however an additional polyaspartic topcoat application is recommended for protection against scuffing, walk off patterns, UV resistance and a long-lasting floor.

SYSTEM COMPOSITION

The Liquid Quartz system is a multi-layered application made up of the following components:

PRODUCTS	Coverage Rate
1. <i>4195 Direct to Concrete Epoxy</i> - A pigmented primer applied to concrete substrates (2 coats are recommended to avoid outgassing from concrete slab)	<i>150-250 ft² per gal</i>
2. <i>41 Accelerator (optional)</i> - Additive packs that can be mixed with 4195 to speed up its cure rate for a 1 day install.	<i>1-3 packs per 1.5-gal kit of 4195</i>
3. <i>1009 Liquid Quartz Resin and Hardener</i> – 100% solid epoxy that is used with the decorative powder to create the desired appearance.	<i>80 mils = 20 ft² per gallon of mixture 70 mils = 25 ft² per gallon of mixture 60 mils = 30 ft² per gallon of mixture</i>
4. <i>1009 Liquid Quartz Cove , A-Component</i> - 100% solid epoxy that is used with the decorative powder and fumed silica to create the desired vertical appearance.	<i>4 inch cove: 150 lineal feet per kit 6 inch cove: 100 lineal feet per kit 18-lb. bag per 1.5-gal kit of 1009</i>
5. <i>479* Liquid Quartz Powders (Colors available, below)</i> - Decorative powder available in seven blended colors.	<i>175 - 200 ft² per gal</i>
6. <i>5085 Ultra High Solids Polyaspartic Topcoat:</i> 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) while providing a deep high gloss surface that can be walked on in as little as 2 hours.	

Slurry Powder Colors:

4791 Moondust
4792 Contrast
4793 Gravel
4794 Deep Blue
4795 Sesame
4796 Cork
4797 Gingerbread

Recommended 4195 Basecoat:

Whisper Grey
Slate Grey
Slate Grey
Whisper Grey
Cottonwood
Beige
Baja Beige

ADVICE BEFORE INSTALLATION

MIXING PRODUCTS

4195, 1009, 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 one kit at a time. The more you mix, the shorter your pot life (working time) will be.*

HOT WEATHER TIPS

4195, 1009, and 5085 have a shorter pot life in hot conditions. Keep the material core temperature around 70°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 epoxies (4195 and 1009). 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 frigid conditions. Keep the material core temperature around 70°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.

For the clear finishes, if instructions are not followed, the 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.

***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.

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, and methods of correcting problematic and contaminated substrates.

CONCRETE

Liquid Quartz and Cove Systems Installation Guide

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 35°F 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 Versatile's representative for recommendations.

If the concrete allows water to penetrate then proceed to clean the surface using V-100 concrete cleaner degreaser. Use liberal amounts on oils stains and scrub until the water no longer beads on stain

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

Versatile only recommends its Liquid Quartz system for use over concrete. All other substrates are done at the user's own risk.

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 (4195 and 5085 application), or notched squeegee (1009 application).
- Optional: Spike roller for 1009 Liquid Quartz application (details, below)

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 manage properly whilst keeping a wet edge.
- Begin by cutting-in the wall covings 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" nap 18" wide roller.

Liquid Quartz and Cove Systems Installation Guide

- Work the material evenly to a wet film thickness of 5-10mils (150-250 SF/ 1gal kit).
- Cross Roll the surface evenly in the opposite direction to eliminate Roller Lines. 5-10 min after applying. 4195 has self-level qualities.
- Allow the 4195 to cure a minimum of 2-6 hours (accelerated) 12-24 hours (standard) before repeating the procedure for second coat within 8-24 hours.
- If more than 24 hours has passed, then sand and scuff the floor to de-gloss before proceeding to a 2nd coat or additional Topcoats.

** **Note:** 1 Coat installations can be achieved, however due to the wicking nature of this product it may not have uniform build and hide with one coat. 2 coats are recommended to achieve uniform build and hide.*

4. 1009 LIQUID QUARTZ EPOXY APPLICATION

Note -

- Wait at least 2-6 hours (accelerated) 12-24 hours (standard) from 4195 application before applying the 1009 Liquid Quartz Epoxy.
- Material be stored at room temperature (50-75°F) 12 -24 hours prior to application.
- Mix all components in a clean, dry five-gallon plastic pails.

Mixing -

- Premix one-gallon of 1009 Liquid Quartz A-component for 1 minute using a jiffy-type mixing blade.
- Mix 1009 A-Component with 1009 B-Component at 2:1 volumetric ratio listed on the kit label for 1 minute using a jiffy-type mixing blade at no less than 700rpm.
- Then add a bag of slurry filler slowly to create an epoxy slurry mix and mix for another 5 minutes till the mixture is homogeneous. Use one 18-lb. bag of slurry powder for each 1.5-gal 1009 Liquid Quartz kit.
- Once mixed, this Liquid Quartz has a pot-life of 30 minutes, this is based on 1.5-gal mass (plus powder) at normal temperature at 75° F.

****Caution:** 1009 Liquid Quartz Epoxy generates heat as it cures and causes a reduction in pot-life & working time. Work with only as much material that can be effectively managed within the pot-life.*

Application –

- After mixing pour material onto the floor and work it back and forth with the use of a notched trowel or notched squeegee. Apply the Slurry mix at a spread rate of 20 ft²/gallon (80 wet mils) up to 27 ft²/gallon (60 wet mils). Keep firm pressure on the trowel when spreading.
- Use notched squeegee or Tile Trowel, for corners and edges to achieve the correct thickness.
- Once the slurry mix is spread out evenly, use a 3/8" Nap 18" Lint Free Roller to lightly roll the entire surface, keeping the spread rate consistent. This will help the slurry even out across the entire floor.
- Then back roll with a porcupine roller to reduce the possibility of outgassing bubbles occurring.
- Use Spiked shoes to walk back onto the product.

Cure Times -

- Coating can typically accept light foot traffic in 6-8 hours depending upon ambient temperatures, vehicular traffic with pneumatic tires in 72 hours.
- Full cure occurs in 7 days.

5. COVE APPLICATION

Note - Wait at least 2-6 hours (accelerated) 12-24 hours (standard) from 4195 application before applying the Cove Mix

Cove Base Mixing

- The components of the Cove system should be stored at room temperature (50-75°F) 12 -24 hours prior to application.
- Mix all components in a clean, dry five-gallon plastic pail.

Liquid Quartz and Cove Systems Installation Guide

- Premix one-gallon of the 1009 Liquid Quartz A-component with 1/3 lb. of fumed silica for 1 minute using a jiffy-type mixing blade add additional fumed silica as required.
- Then, mix in ½-gallon of the regular 1009 Liquid Quartz B-Component 2-3 minutes.
- Add the Liquid Quartz powder: Use one 18-lb. bag of slurry powder for each 1.5-gal of 1009 Cove Base and mix well for 5 mins or until the mixture is homogeneous in the container.
- The Cove Base mixture has a pot-life of 30 minutes, this is based on 1.5-gal mass (plus powder) at normal temperature at 75° F.

**Caution: The Cove Base mixture generates heat as it cures and causes a reduction in pot-life & working time. Work with only as much material that can be effectively managed within the pot-life.*

Application -

- Use a coving trowel that is two inches wider than the cove height.
- Apply duct tape to the top edge of the coving trowel. Eight layers deep. This will create a lip that holds the trowel off the wall to achieve the desired film build (60 – 80 mils).
- Hold trowel against the wall and measure how far out the radius ends from the wall. Using this measurement, drop a tape line along the floor, parallel to the wall. This will function as a stopping point for the bottom of the cove.
- Tape from the top (wall) and bottom (floor) will be removed after the cove is installed. This will leave a feather-edged transition on the floor and a 60-80 mil protrusion on top. The top edge can be sanded to remove any imperfections and then caulked to leave a nicely finished edge. The bottom edge can be lightly sanded to create a invisible transition from cove to floor.
- Start to hang the blended cove material using a hand trowel or margin trowel to rough out the cove form. Pot life on the mixed cove material is at least 30 minutes.
- Using the taped coving trowel, strike the pre-hung coving base material. Note: Apply material similar to applying caulk.
- After the first strike, clean the trowel and apply solvent to the trowel. Take the solvent-lubricated trowel and smoothen the cove.
- When complete, remove tape lines from the top and bottom of the cove
- Apply the Cove Base mixture at a spread rate of 100 lineal feet per mixed kit for a 6-inch cove and 150 lineal feet per mixed kit for a 4-inch cove.

Cure Times -

- The 1009 Cove base will be dry-to-touch in 6-8 hours depending upon ambient temperature and humidity.
- Full cure occurs in 7 days.

5. 5085 TOPCOAT APPLICATION (for UV protection)

Note -

- Allow the 1009 Liquid Quartz to cure a minimum of 6-8 hours and a maximum of 48 hours before proceeding to the next step. **Lightly sand surface to remove any defects and to assure a good flow-out of the 5085 topcoat.**
- For additional topcoat options please visit www.versatile.net or consult a VBP Representative for recommendations

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 400 rpm.
- 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)*

Notched Squeegee Application -

- After mixing, cut in edges/cove walls with a 3-4-inch chip brush and or 6" weenie roller.

Liquid Quartz and Cove Systems Installation Guide

- Be careful not to make the cut in lines too wide. If a cut in line is 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 a Red Notched Easy Squeegee (8 – 12 mil) to spread 5085 out evenly so the entire surface is coated. Keeping the spread rate at 175 - 200 ft²/gal.
- Always pour out additional ribbons on the surface as needed and make sure to keep a "Wet Edge."
- Keep firm pressure on the squeegee when spreading.
- Use spike shoes to walk back out onto coated surface.
- Once 5085 is spread out evenly with the squeegee, use a 3/8" Nap 18" Lint Free Roller to back roll the entire surface. 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/cove 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 is 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.
- Always pour out additional ribbons on the surface as needed and make sure to keep a "Wet Edge."
- Walk back onto the wet floor on spiked shoes to disperse any heavy puddles of material that are pooling.
- Use spike shoes to walk back out onto coated surface.
- Once 5085 is spread out evenly with the roller, back roll the entire surface, keeping spread rate at 175 - 200 ft²/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°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.

CLEAN-UP

- Immediately cleanup splatter marks and tools with MEK or Acetone. 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.
- For 4195 basecoat and for 5085 polyaspartic, use a 3/8" nap 18" lint-free roller to help speed up the application.
- Be sure to back-roll the clear protective finish to ensure a uniform coat.
- Do not allow the 4195 basecoat or 5085 polyaspartic finish coats to puddle.
- Use accelerators when installing in cold climates or where the return to service time needs to be fast-tracked.



Liquid Quartz and Cove Systems Installation Guide

- Mask all areas that need protection.
- Store material at 50-75°F
- Do not force dry any components of the Liquid Quartz 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 Safety Data Sheets, 2 Component Chemical Safety Guide and Individual Product Installation Guides before commencing work.

TECHNICAL SERVICES

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