KEY RESIN COMPANY

Installation Instructions

Key Epocon Quartz B-195-HP

I. GENERAL INFORMATION

KEY EPOCON QUARTZ B-195-HP is a decorative resin flooring system consisting of moisture vapor tolerant Key Epocon SL basecoat coated with clear, 100% solids epoxy resin and colored quartz aggregate. **KEY EPOCON QUARTZ B-195-HP** is finished with clear catalyst-cured coats of resin available in a satin or gloss finish. The installed system can be textured or smooth as desired. Easy maintenance minimizes bacterial growth. **KEY QUARTZ GRANULES** are available in a series of pre-blended patterns or solid colors.

II. SURFACE PREPARATION

Surface Preparation is the most critical portion of any successful resinous flooring system application. All substrates must be properly prepared with ***shot blasting method ONLY*** (unless other method approved by Key ResinTechnical Service) to a minimum surface profile of ICRI CSP-3 to a maximum CSP-6 (www.icri.org) as outlined in **KEY RESIN COMPANY'S TECHNICAL BULLETIN #1.** Specific attention should be paid to the following:

A. Concrete Placement--An efficient vapor barrier should be under slabs on or below grade to prevent moisture migration.
B. Curing and Finishing Techniques of the Concrete Substrate
C. Age of Concrete
D. Previous Contamination of the Substrate
E. Present Condition of the Substrate

Also, the temperature and humidity conditions of the area to receive the flooring system should be checked. An optimum room temperature of 75ºF with a minimum slab temperature of 60ºF is required for proper cure of the resin flooring system.

III. MATERIAL QUANTITIES

A. Guideline System Requirements for 1000 ft²

Key Epocon Quartz B-195-HP (3/16" Double Broadcast)	*Qty./1000 ft²*
1. *Key Epocoat* Primer/Scratch Coat—add 10% water	6 gallons
2. *Key Epocoat* Body Coat—add 5% water (neutral tint)	40 gallons
3. *Key Colored Quartz Granules (Estes BCM)*	300-400 pounds
4. *Key #615* Chemical Resistant Binder (2nd seed coat)	12 gallons
5. *Key Colored Quartz Granules—KBQ-28*	350-400 pounds
6. *Key #615* Chemical Resistant Binder (grout coat)	12 gallons
6A. *Key #470* Polyaspartic (grout coat)-optional	12 gallons
7. *Key #615* Chemical Resistant Binder (seal coat)-optional	5-10 gallons
7A. *Key #470* Polyaspartic (seal coat)-optional	5-10 gallons
7B. *Key #467-HS-Satin* Urethane (seal coat)-optional	2 gallons

Note: It is optional to add filler sand (30 mesh) or BCM colored quartz to the Key Epocoat bodycoat during mixing, ½ gallon of sand (6-7 lbs) per 1.25 gallons Key Epocoat. The subsequent broadcasted aggregate will sink less, yielding a more consistent finish. 1000 sq. ft. will require 240-280 lbs of 30 mesh sand or colored quartz.

IV. INSTALLATION

Note: Route cracks larger than 1/32" and fill with Epocoat during the scratch coat application. If using Key #580 Flexible Epoxy Membrane for overlaying cracks or sawcuts, the Key #580 must be applied over the finished Key Epocon SL system (i.e., over the sand broadcast, after sweeping and vacuuming all loose or poorly adhered sand, or over sand-filled Key Epocon SL with a smooth finish). If applying Key #580 over sand broadcast finish, factor additional 20%-30% material to achieve minimum 32 mils over the sand texture. Be aware that membrane should only be used under aggregate filled floor systems unless exceptions are approved by Key Resin. Be aware that membrane treated areas may be evident through 1/16"-1/8" floor toppings as a slightly raised area, a minimum 3/16" topping is recommended to reduce this effect, or apply the Key #580 Membrane over the entire floor area.

1. Mixing *Epocoat*
   a. Do not alter mixing ratios in any way. Part I and Part II are supplied in the correct mixing ratios. Always mix a complete unit in the proportions supplied.
   b. Mix material for approximately 3-4 minutes to form a homogenous consistency using a slow speed drill and "Jiffy" blade. Do not entrap excessive air. Scrape all sides and bottom of container to ensure thorough mixing.
   c. For primer/scratch coat material add 10% water to lower viscosity (16 oz per 1.25 gallons Epocoat).
2. Application
   a. Primer/scratch coat: Apply with a squeegee and short nap roller at a coverage rate of 160 ft^2/gallon. After squeegee application, back roll with the short nap roller to achieve a uniform coverage. Allow to cure hard enough for foot traffic, about 3-4 hours at 75 degrees F.
   b. Bodycoat (Broadcast option): Mix as outlined in step 1, it is optional to add ***no more*** than 5% water (8 oz per 1.25 gallons Epocoat). Apply mixed material using a ¼ inch V-notched trowel/rake or ¼ inch V-notched rubber squeegee. Immediately backroll with a looped roller. A 1.25 gallon unit will cover 30 ft^2 @ 1/16" (25 ft^2/gallon).
      Tool Suppliers:
      ¼" V-notch metal trowel/rake: Kraft Tools (www.krafttool.com, 18" Steel ¼" V-notch rake, part #GG605-01)
      ¼" V-notch squeegee: Midwest Rake (www.midwestrake.com, 16" EPDM ¼" V-notch squeegee, part #79265)
   c. Immediately broadcast surface with colored quartz (BCM size) to excess (30-40 lbs./100 sq. ft.) to achieve 1/8 inch. Sweep and vacuum excess or loose sand after hardening (12-24 hours, depending on temperature).

Second Seed Coat

3. Mixing *Key #615* Chemical Resistant Binder
   a. Stir each component prior to mixing.

b. Mix two (2) parts by volume of Part A (Base) with one (1) part by volume of Part B (Hardener) for three minutes with a low speed electric drill mixing paddle.
c. ***Mix only that amount of material that can be immediately poured out and spread/backrolled in 20-25 minutes.***

4. Application
   a. Immediately pour mixed material onto floor in strips and spread at a rate of 80 to 90 ft² per gallon using a flat trowel or squeegee, followed with backrolling. A notched trowel or notched squeegee will help to achieve even distribution. If using a flat squeegee or trowel, it is recommended that the material be lightly backrolled with a medium-nap roller to smooth and level any tails or ridges.
   b. To minimize marks in finished system, the contractor should wear "spiked" shoes while walking on wet material.
   c. Allow the material to level for approximately 5 to 10 minutes.

Termination points at the end of the day should be made at doorways, expansion joints, etc. If it is not possible to terminate at these points, 2" masking tape should be placed in a straight line at the ending point. Carefully trowel the material up to and slightly over the inside edge of the tape. Allow material to cure for about thirty (30) minutes and remove the tape.

5. Broadcast to excess
   Broadcast *Key Blended Quartz Granules* into the wet floor system until the surface of the system appears dry. Be careful not to clump the material or produce high spots. Approximately 35 to 40 pounds of sand will be needed for 100 ft² of flooring. If terminating the system with tape as described in note above, broadcast sand up to the tape and remove after material cures for thirty (30) minutes. ***Remember to only walk on the wet surface while wearing "spiked" shoes!!! Do not walk on floor after broadcasting.***

6. Allow the seeded floor to cure overnight. Sweep excess sand with a stiff bristled broom or power vacuum. A light sanding or rubbing with a stone will aid in achieving a uniform "sanded" surface.

Grouting and Sealing

The grouting and sealing of a floor should be performed over the entire area receiving the system. The applicator should complete the single seed portion of the application prior to grouting and sealing. The coverage rate and number of the applied grout and seal coats dictate the final texture of the floor. Higher coverage rates will yield rougher textures.

7. **Grouting**
   a. Mix *Key #615* as described in the section above.
   b. Spread the *Key #615* at a rate of approximately 80 ft² per gallon depending on desired finish texture over the rough sand surface using a flat trowel or sgueeqee tightly over the surface.
   c. ***Thoroughly*** back-roll and cross-roll the material with a short nap roller to help spread the material, eliminate trowel marks, and to work the resin down into the texture of the sand to displace air, which will help reduce pinholes.
   d. Allow material to cure at least eight hours.

8. **Seal Coat** (may be optional depending on desired finish texture)
   Using ***Key #615*** **Chemical Resistant Binder**
   a. Mix *Key #615* as described in the section above.
   b. Spread the *Key #615* at a rate of approximately 100-200 ft² per gallon (depending on desired finish texture) over the surface using a flat trowel or sgueeqee tightly over the surface.

c. Lightly back-roll the material with a short nap roller to help spread the material and eliminate trowel marks.
d. Do not open to light foot traffic for 24 hours. Full chemical cure and maximum resistance are achieved in seven (7) days.

Using ***Key #470*** **Polyaspartic Grout/Sealer (optional)**

Refer to separate Key #470 Polyaspartic detailed Installation Instructions.

Using ***Key #467-HS-Satin*** **Urethane Sealer (optional)**

Refer to separate Key #467-HS-Satin detailed Installation Instructions.