



# Installation Instructions

## Key Quartz B-195-HP

### I. GENERAL INFORMATION

**KEY QUARTZ B-195** is a chemical resistant, decorative resin flooring system consisting of clear, 100% solids epoxy resin and colored quartz aggregate. **KEY QUARTZ B-195** 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 to a minimum CSP-3 surface profile 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
- F. Moisture Content and Moisture Vapor Emission Rate of Concrete Slab

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

### III. MATERIAL QUANTITIES

#### A. Guideline System Requirements for 1000 ft<sup>2</sup>

<b><i>Key Quartz B-195-HP (3/16" Double Broadcast)</i></b>	<b><i>Qty./ 1000 ft<sup>2</sup></i></b>
1. Key #502 Primer/Low Modulus Binder	4 gallons
2. Key #510 Epoxy Binder (1 <sup>st</sup> seed coat)	22 gallons
3. Key <i>Self-leveling Filler</i>	425 pounds
4. Key <i>Colored Quartz Granules</i>	500-600 pounds
5. Key #510 Epoxy Binder (2 <sup>nd</sup> seed coat)	12 gallons
6. Key <i>Colored Quartz Granules</i>	400-500 pounds
7. Key #615 Epoxy (grout coat)	10-12 gallons
8. Key #615 Epoxy (optional seal coat)	5-10 gallons
or Key #450 Urethane Topcoat (optional seal coat)	3-4 gallons

Note: Step #8 may be optional depending on finish texture desired and project requirements. Coverage rate of step #8 varies depending on finish texture desired and project requirements. Refer to approved project sample.

## IV. INSTALLATION

### A. Priming

1. Mixing **Key #502 Low Modulus Epoxy Primer**
  - 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. If thinning is desired, add no more than one pint of xylene per gallon of epoxy at time of mixing.
  - d. ***Mix only that amount of material that can be immediately poured out and spread/backrolled in 25-35 minutes. Do not let mixed material sit in bucket longer than 5 minutes or working time will be significantly reduced.***
2. Application
  - a. Pour primer onto the prepared concrete.
  - b. Spread with either a flat trowel or squeegee to a coverage of to 250 ft<sup>2</sup> per gallon.
  - c. Back roll with a short nap roller.
  - d. Broadcast lightly with dry 30-mesh silica sand if allowed to cure longer than 24 hours before topcoating.
3. Allow Primer to sit for 12 to 16 hours.

### B. First Seed Coat

1. Mixing **Key #510 Epoxy Binder plus Key Self-Leveling Filler**
  - a. Stir each component prior to mixing.
  - b. Mix four (4) 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. Continue mixing while slowly adding *Key Self-leveling Filler* to the premixed *Key #510*.
  - d. Continue mixing resin/filler for 3 to 4 minutes or until material is blended to a uniform consistency. The mix has the appearance of "pancake batter."
  - e. ***Mix only that amount of material that can be immediately poured out and spread/backrolled in 25-35 minutes. Do not let mixed material sit in bucket longer than 5 minutes or working time will be significantly reduced.***
2. Application
  - a. Place mixture on primed surface and spread with ¼" V-notched trowel or ¼" V-notched squeegee or rake pulling the material toward you in a "figure-8" pattern. Leave a "wet line" or puddle of material between batches to avoid "knot-lines" in the finished system.
  - b. Back-roll system with a spiny roller while material is still wet. 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 10 minutes. If surface or room temperatures are below 70°F, some of the self-leveling filler can be left out of the mix to improve fluidity of the mix. Slab and room temperature should be maintained at minimum 70°F and maximum 90°F for best results.

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.

3. 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 4 to 6 pounds of sand will be needed for 10 ft<sup>2</sup> 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.***
4. Allow the seeded floor to cure overnight. Sweep excess sand with a stiff bristled broom and power vacuum. Lightly grind any lumps or ridges.

### C. Second Seed Coat

1. Mixing **Key #510 Epoxy Binder (note: Key #615 may be substituted)**
  - a. Stir each component prior to mixing.
  - b. Mix four (4) 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 25-35 minutes. Do not let mixed material sit in bucket longer than 5 minutes or working time will be significantly reduced.***
2. Application
  - a. Immediately pour mixed material onto floor in strips and spread at a rate of 80 to 90 ft<sup>2</sup> per gallon using a trowel, squeegee, or roller. 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 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.

3. 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 4 to 5 pounds of sand will be needed for 10 ft<sup>2</sup> 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.***
4. Allow the seeded floor to cure overnight. Sweep excess sand with a stiff bristled broom and power vacuum. A light sanding or rubbing with a stone will aid in achieving a uniform "sanded" surface.

### D. Grouting and Sealing

The grouting and sealing of a floor should be performed over the entire area receiving the system. 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.

1. Mixing **Key #615 Chemical Resistant Epoxy**
  - 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 25-35 minutes. Do not let mixed material sit in bucket longer than 5 minutes or working time will be significantly reduced.**
2. Application: Grouting
  - a. Spread the **Key #615** at a rate of approximately 75-80 ft<sup>2</sup> (depending on desired finish texture) per gallon over the rough sand surface using a flat trowel or squeegee 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. Allow material to cure at least 14-16 hours at 75 degrees F.
3. Application: Seal Coat (may be optional)  
Using **Key #615 Chemical Resistant Epoxy**
  - a. Mix **Key #615** as described in the section above.
  - b. Application
    - i. Spread the **Key #615** at a rate of approximately 100-200 ft<sup>2</sup> (depending on desired finish texture) per gallon over the surface using a flat trowel or squeegee tightly over the surface.
    - ii. Lightly back-roll the material with a short nap roller to help spread the material and eliminate trowel marks.
    - iii. Do not open to light foot traffic for 24 hours at 75 degrees F. Full chemical cure and maximum resistance are achieved in seven (7) days.

Using **Key #450 Urethane Topcoat**

- a. Mixing
  - i. Thoroughly mix each component prior to combining.
  - ii. Mix two (2) parts by volume of Part A (Resin) with one (1) part by volume of Part B (Hardener) for three minutes with a low speed electric drill mixing paddle.
  - iii. **Do not mix more material than can be used in 60-90 minutes. Do not leave mixed material in the pail for more than 60-90 minutes!**
- b. Application
  - i. Pour material onto floor in a line and spread with a flat squeegee to a coverage of 250-300 ft<sup>2</sup>/gallon (or specified coverage rate). "Dip and roll" procedure may be used with small batches, use within 60-90 minutes. This will yield 3-4 mils dry film thickness.
  - ii. Immediately and slowly back roll with a short nap mohair roller (cleaned of loose hair, lint) to even the surface texture of the coating. If crossrolling will also be done, do so immediately. Do not delay backrolling/crossrolling or excessive solvent may evaporate leading to formation of microbubbles. Do not overroll or rapidly roll the **Key #450 Urethane**.
  - iii. Allow material to cure 12 to 16 hours (at 75 degrees F) before applying a second coat. SU-93 Thinner and/or **Key #450 Accelerator** may be used as conditions require, consult with Key Resin Technical Service for specific recommendations.
  - iv. Do not open to light foot traffic for 24 hours. Full chemical cure and maximum resistance are achieved in five (5) days.