



Installation Instructions

Key Lastic DE

I. GENERAL INFORMATION

KEY LASTIC DE is a fluid applied, 125-195 mil (1/8"-3/16") decorative resilient flooring system for concrete floors in mechanical equipment rooms, mezzanines, decks and other applications requiring a resilient flooring system with waterproofing membrane or crack isolation membrane. The resiliency of **KEY LASTIC DE** provides sound-deadening qualities and cushioning under-foot. **KEY LASTIC DE's** elastomeric properties will allow for horizontal movement to bridge most cracks without fracturing the waterproofing membrane.

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**. If moisture testing confirms excessive levels of moisture, apply moisture control system Key Epocon SL. 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 or Moisture Vapor Emission rate of the Concrete

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 ft²

<i>Key Lastic DE 1/8"-3/16"</i>	<i>Qty./ 1000 ft²</i>
1. <i>Key #502 Primer/Low Modulus Binder</i>	4 gallons
2. <i>Key #580 Flexible Epoxy Crack Isolation Membrane</i>	20 gallons
3A. <i>Key Fiberglass Scrim Cloth (optional, for severe cracks)</i>	2.5 rolls
4. <i>Key #580 Flexible Epoxy Basecoat (gray)</i>	14-20 gallons
5. <i>Key Colored Quartz (Estes BCM mesh)</i>	450-600 pounds
6. <i>Key #510 Epoxy Binder (clear)</i>	10-12 gallons

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| 7. <i>Key Colored Quartz</i> (Estes BCM mesh) | 350-500 pounds |
| 8. <i>Key #512</i> 100% Solids Epoxy Coating (clear) | 10-12 gallons |
| 9. <i>Key #512</i> 100% Solids Epoxy Coating (clear) | 6-10 gallons* |
| 9A. <i>Key #450, or Key #465, or Key #467, or Key #470</i> (optional) | Varies |
- Note: Urethane or Polyaspartic Sealer offers higher gloss and stain resistance

*Note: A second topcoat (step #9) may be necessary depending on specified finish texture.

Note: For exterior applications, use Key #400 for crack isolation membrane and Key #470 for topcoats.

Note: For severe cracks, reinforce Key #580 with Fiberglass Scrim Cloth, place it gently on the surface, do not imbed. Or, adhere to surface of cured Key #580 using Key #502. Treat individual cracks/sawcuts or cover entire floor area if cracks are numerous.

IV. INSTALLATION

A. Priming

Key Resin Company recommends that every flooring system be installed with a primer to insure maximum adhesion to the prepared substrate. Priming will also help to seal air in the concrete and prevent outgassing and air bubbling in the finished system. Use **Key Epocon SL** or other recommended moisture mitigation system if moisture vapor emission rate or moisture content exceeds recommended maximums.

1. Mixing **Key #502 Primer/Low Modulus 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. If thinning is desired, add no more than one pint of xylene per gallon of epoxy at time of mixing.
 - d. ***Do not mix more material than can be immediately poured out in ribbons and spread/backrolled within 40 minutes. Do not leave mixed material in the pail for longer than 5-10 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 ft² per gallon.
 - c. Back roll with a short nap roller.
3. Allow Primer to sit for 8 to 12 hours. If primer is to be allowed to sit overnight or prolonged periods, broadcast lightly with dry silica sand.

B. Flexible Crack Isolation Waterproof Membrane

Using Key #580 Flexible Epoxy

1. Mixing **Key #580 Flexible Epoxy**
 - a. Stir each component prior to mixing.
 - b. Mix one (1) part 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.
2. Application
 - a. Place mixture on primed surface and spread at a rate of approximately 50 ft² per gallon.
 - b. Gently back roll using short nap roller.

Note: For severe cracks, reinforce Key #580 with Fiberglass Scrim Cloth, place it gently on the surface, do not imbed. Or, adhere to surface of cured Key #580 using Key #502. Treat individual cracks/sawcuts or cover entire floor area if cracks are numerous.

- c. Allow to cure overnight. May require minimum of 16-18 hours cure at 75 F degrees.

Using Key #400 Urethane Elastomer

1. Mixing **Key #400 Urethane Elastomer**
 - a. Mix 6.6 parts by volume of Part A with one (1) part by volume of Part B using a low speed drill for 3-5 minutes. It is recommended to mix full units due to unusual mix ratio.
 - b. **Mix only that amount of material that can be used in 20-30 minutes.**
If desired, a small amount of xylene may be added to thin the material to increase fluidity.
2. Application
 - a. Spread **Key #400** at a rate of approximately 50 ft² per gallon.
 - b. Gently back roll using a short nap roller.
 - c. Allow to cure a minimum of 8-12 hours before applying next coat. If **Key #400** sits longer than 24-48 hours before applying topping system, solvent wiping or priming the membrane before application of the topping system may be necessary.

C. First Seed Coat: Broadcast Into Key #580 Flexible Epoxy Membrane

***Note: Key #580 is available in gray only, 2nd quartz broadcast is required to obtain consistent color.**

1. Mixing **Key #580 Flexible Epoxy (gray)**
 - a. Stir each component prior to mixing.
 - b. Mix one (1) part 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.
2. Application
 - a. Place mixture on previous application of Key #580 or Key #400 and spread at a rate of approximately 50-75 ft² per gallon.
 - b. Gently back roll using short nap roller.

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.

- c. 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 45 to 60 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 thirty (30) minutes. **Remember to only walk on the wet surface while wearing "spiked" shoes!!! Do not walk on floor after broadcasting.**
3. Allow the floor to cure overnight. May require minimum of 16-18 hours cure at 75 F degrees. 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.

D. Second Seed Coat: Broadcast Into Key #510 Epoxy Binder

Note: Key #511 or Key #615 may be substituted for Key #510.

1. Mixing **Key #510 Epoxy Binder**
 - 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 in ribbons and spread/backrolled in 25-30 minutes. Mixed material left in the bucket longer than 5-10 minutes will have significantly reduced working time.**
2. Application
 - a. Immediately pour mixed material onto swept and vacuumed floor in strips and spread at a rate of 80 to 100 ft² per gallon using a trowel, flat squeegee or notched squeegee. A notched trowel or notched squeegee will help to achieve even distribution. Lightly backroll with a medium or short-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. Broadcast by hand or power blower high into the air, doing multiple light broadcasts, gradually filling up the resin. Approximately 3 to 4 pounds of sand will be needed for 10 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.**
4. Allow the seeded floor to cure overnight, 14-16 hours. Sweep excess sand with a stiff bristled broom or power vacuum. Optional: It helps to sand the floor in two directions using a pole sander, rubbing stone or buffer with 36 grit sandpaper. Be careful with buffer to avoid missing spots or burning a pattern into the quartz. Sweep and vacuum after sanding procedure.

E. Grouting and Sealing: Key #512 UV Resistant Epoxy Sealer

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 (less thickness) will yield rougher textures.

1. **Grouting**
 - a. Mix **Key #512 UV Resistant Epoxy** at 2:1 ratio, following mixing and cure time instructions outlined in the product data sheet.
 - b. Spread the **Key #512** at a rate of approximately 75-100 ft² 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.

2. Seal Coat

(Optional depending on desired finish texture)

Using **Key #512 UV Resistant Epoxy**

- a. Mix **Key #512** as described in the section above.
- b. Application
 - i. Spread the **Key #512** at a rate of approximately 100-160 ft² per gallon (depending upon desired finish texture) over the surface using a flat trowel or notched 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. Allow material to cure at least 14-16 hours if topcoating.
- iv. Do not open to light foot traffic for 24 hours (at 75F degrees), medium duty traffic for 48-72 hours. Full chemical cure and maximum resistance are achieved in seven (7) days.

F. Alternative Materials

The following alternative materials may be used, depending upon project specifications, following the mixing and application instructions of each material (consult with product data sheet or Key Resin Technical Services):

- a. Primer
Key Epocon SL for excessive moisture vapor emissions or moisture content. Consult with Key Resin for recommendations.
- b. Grout and Seal Coat
Key #470 Polyaspartic Sealer for faster cure time situations, improved chemical and stain resistance, and UV light resistance. Key #615 or Key #630 for improved chemical resistance.
- c. Urethane or Polyaspartic Finish
Key #450 Urethane for improved gloss and stain resistance. Key #465 Urethane Sealer for low VOC requirements. Key #467 High Solids Urethane for low VOC and low odor requirements. Key #445 Water Based Urethane (matte finish, for approved applications only) for low VOC and low odor requirements. Key #446 Water Based Urethane (gloss finish, for approved applications only) for low VOC and low odor requirements. Key #470 Polyaspartic for faster cure time situations, improved chemical and stain resistance.