



Installation Instructions

Key Epocon SL (Epocoat) Moisture Vapor Control System

I. GENERAL INFORMATION

KEY EPOCON SL is designed as a concrete slab surface treatment when moisture vapor transmission exceeds 3 pounds of moisture as tested with the calcium chloride test procedure (ASTM F-1869-11), or for use when concrete slabs test higher than 79% as tested with the relative humidity probe test (ASTM F-2170-11).

II. SURFACE PREPARATION

Surface Preparation is the most critical portion of any successful resinous flooring system application. All substrates must be properly prepared with **Shotblasting method ONLY** 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**, unless alternative method is approved by Key Resin Technical Service. Specific attention should be paid to the following:

- A. Concrete Placement
- 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 75°F with a minimum slab temperature of 60°F is required for proper cure of the resin flooring system.

III. MATERIAL QUANTITIES

Guideline System Requirements for 1000 ft²

<i>Key Epocon SL Moisture Vapor Control System 100-125 mils</i>	<i>Qty./ 1000 ft²</i>	<i>Coverage Rate</i>
1. Key Epocoat Primer/Scratch Coat—add 10% water	6 gallons	160 ft ² /gallon
2. Key Epocoat Body Coat—add 5% water (optional)	43 gallons	18 ft ² /gallon*
3. Key #730 Filler Sand (80-100 mesh)	250 pounds	mixed with Epocoat
4. Key Broadcast Sand (30 mesh, or 40-60 mesh) (sand broadcast step may be deleted if smooth finish is desired)	300-500 lbs	0.3-0.5 lbs/ft ²

*Note: Coverage rate of Key Epocoat mixed with Key #730 Sand and water is 18 ft²/gallon of mixed slurry. Typical batch size: 2.5 gallons Key Epocoat + 1 gallon (13 lbs.) Key #730 Filler Sand + 16 oz. water (optional) = 3.3 gallons of mixed slurry, covering 60 ft² at 90 mils.

Note: Total system thickness is nominal 100-125 mils (1/8") as outlined. Sand broadcast step #4 may yield thickness slightly greater than 125 mils. It is **required** to add 80-100 mesh sand (or finer blend) as a filler to the Key Epocoat bodycoat during mixing as outlined, for both smooth and broadcast options. To achieve a very light surface texture without broadcasting, use Key 460 Sand (40-60 mesh blend) as the filler.

IV. INSTALLATION

Note: Route cracks larger than 1/16" and fill with sand-filled Epocoat (i.e., bodycoat mix design) during the scratch coat application. If filling control joints (sawcuts) with the intention to cover the filled joint with the floor system, fill with sand-filled 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 smooth Key Epocon SL). 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 flexible membrane should only be used under aggregate-filled floor systems unless exceptions are approved by Key Resin. Be aware that flexible membrane used to treat isolated cracks or joints may be evident through 1/16"-1/8" floor toppings as a slightly raised area, a minimum 3/16"-1/4" 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 or 32 oz per 2.5 gallons Epocoat).

2. Application

- a. Primer/scratch coat: Apply with a squeegee and short nap roller at a coverage rate of 160 ft²/gallon. After squeegee application, back roll with the short nap roller to achieve a uniform coverage. Allow to cure hard enough for light foot traffic, about 3-4 hours at 75 degrees F.
- b. Bodycoat: Mix as outlined in step 1, it is optional to add 5% water (8 oz per 1.25 gallons Epocoat or 16 oz per 2.5 gallons Epocoat). While mixing, add Key #730 Filler Sand at rate of 1 gallon (13 lbs) per 2.5 gallons Epocoat, continue mixing until thoroughly blended. Apply mixed material using a cam/pin gauge rake set at 1/8", or 1/2" V-notched trowel. Immediately backroll with a looped roller (protruding loop style only!) or spiked roller. A spiked roller may aid with release of entrained air.

Typical batch size (Bodycoat): 2.5 gallons Key Epocoat + 1 gallon (13 lbs) Key #730 Filler Sand + 16 oz water (optional) = 3.3 gallons of mixed slurry, covers 60 ft² at 90 mils (18 ft²/gallon). **90 mils is the minimum slurry thickness required.** Check thickness with a mil gauge to ensure consistent thickness.

- c. Broadcast surface with 30 mesh sand or 40-60 mesh sand to excess (30-50 lbs/100 ft²) to achieve nominal 1/8 inch. Broadcasting procedure should begin within 5-10 minutes after spreading resin to ensure adequate absorption of aggregate. Sweep and vacuum excess or loose sand after hardening, allow for 16-24 hours of cure time, depending on temperature.
- d. If a smooth finish is desired, delete the sand broadcast step. A smooth finish may be preferred for thin topcoats needing a smooth finish, or if Key #580 Flexible Epoxy Crack Isolation Membrane will be used, etc.

3. Top Coating, Overlays, Floor Coverings

Apply top coatings or resin floor system directly over broadcast surface or smooth surface. Prime surface with appropriate Key Resin primer if required (varies by product), or apply Key Resin bodycoat, mortar, etc. For vinyl flooring, VCT, carpet, and other floor coverings consult with manufacturer of floor covering for requirements. A self-leveling cement underlayment may be required before application of water based floor covering adhesives to ensure proper cure, consult with adhesive manufacturer.

V. WARRANTY

Key Resin Company offers warranties for systems installed by approved installers. Contact **Key Resin Company** for details.