



Installation Instructions

Key Traffic Coating System

40-60 Mils

I. GENERAL INFORMATION

KEY TRAFFIC COATING SYSTEM consists of a 100% solids epoxy and aggregate system to produce a dense, skid-inhibiting surface that eliminates dirt and chemical penetration. The chemical resistance and overall performance of the **KEY TRAFFIC COATING SYSTEM** can be increased by using different Urethane and Epoxy finish coats; consult subsequent installation instructions concerning specific requirements.

II. SURFACE PREPARATION

Surface Preparation is the most critical portion of any successful resinous flooring system application. All substrates must be properly prepared 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. **Surface profile required for the system (ICRI CSP 2-5 is typical, varies by system)**

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 50°F is required for proper cure of the resin flooring system.

III. MATERIAL QUANTITIES

A. Guideline System Requirements for 1000 ft²

<i>Key Traffic Coating System – 40-60 mils</i>	<i>Qty./ 1000 ft²</i>
1. Key #502 100% Solids Epoxy	6-8 gallons
2. Key Broadcast Sand (30-mesh or 40/60-mesh)	400 pounds
3. Key #520 100% Solids Epoxy Coating	10-12 gallons
4. Key #520 100% Solids Epoxy Coating (optional*)	5-10 gallons
5. Key #450 Urethane Coating (optional*)	3-4 gallons

*Note: Second coat of Key #520, and/or Key #450 may be optional, consult with project specifications. Coverage rates vary depending on required finish texture.

IV. INSTALLATION

Key *Epocon SL* may be substituted for Key #502 if moisture vapor emission rate exceeds maximum limits (refer to Technical Bulletin #1). Contact Key Resin for details.

A. Priming

1. Mixing **Key #520 Epoxy Primer**
 - a. Stir each component prior to mixing.
 - b. 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 and mixing paddle (jiffy mixer).
 - c. Mix only that amount of material that can be immediately poured out, spread, backrolled and broadcasted in 40 minutes. Do not leave mixed material in the pail for 40 minutes! All mixed resin should be poured out of pail in 10 minutes or less to avoid reduced working time.
2. Application
 - a. Pour primer onto the prepared concrete.
 - b. Spread with either a flat trowel or squeegee to a coverage of 125-160 ft² per gallon.
 - c. Back roll with a short nap roller.
3. Broadcast to excess. Broadcast 30-mesh or 40/60-mesh silica sand into the wet resin until the surface of the system appears dry. Be careful not to clump the material or produce high spots. **Remember to only walk on the wet resin while wearing “spiked” shoes!!! Do not walk on floor after broadcasting.**
4. Allow the floor to cure overnight (at 75 degrees F). Sweep excess sand with a stiff bristled broom and vacuum. A light sanding or rubbing with a stone will aid in achieving a uniform “sanded” surface.

B. Sealing

1. Using **Key #520 100% Solids Epoxy Coating**
 - 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 immediately poured out and spread/backrolled in 30-35 minutes. Do not leave mixed material in the pail for longer than 5-10 minutes or working time will be significantly reduced!**
 - b. Application
 - i. Pour material onto floor in a line and spread with a trowel or flat squeegee to a coverage of 80-100 ft² per gallon.
 - ii. Back roll with a short nap roller to even the surface texture of the coating.
 - iii. A second optional coat may be necessary depending on desired finish texture.
 - iv. Do not open to light foot traffic for 24 hours (at 75 degrees F). Full chemical cure and maximum resistance are achieved in five (5) days.
2. Using **Key #450 Aliphatic Urethane Coating (Clear/Pigmented, Gloss or Satin)**
 - 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 90 minutes. Do not leave mixed material in the pail for more than 45-60 minutes!***
- b. Application
 - i. Pour material onto floor in a line and spread with a flat squeegee to a coverage of 250-300 ft²/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 hairs, 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.