



# Installation Instructions

## Key Zycke Flooring 50-60 Mils

### I. GENERAL INFORMATION

**KEY ZYCKE FLOORING** is a decorative resin flooring system consisting of pigmented 100% solids epoxy resin primer and clear 100% solids UV resistant epoxy resin bodycoat mixed with proprietary decorative slurry filler. **KEY ZYCKE FLOORING** is optionally 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 ZYCKE DECORATIVE FILLER** is available in a series of pre-blended colors.

### 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 directly 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. Make sure the slab is free of excessive moisture vapor transmission or moisture content

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>

| <i>Key Zycke Flooring System – 50-60 Mils</i>                  | <i>Qty./ 1000 ft<sup>2</sup></i> |
|--|----------------------------------|
| 1. Key #521 Primer Pigmented                                   | 6 gallons                        |
| 2. Key #512-LV Low Vis. UV Resistant Epoxy Bodycoat (clear)    | 24 gallons                       |
| 3. Key Zycke – Decorative Slurry Filler                        | 285 pounds                       |
| 4. Key #470 Polyaspartic Sealer                                | Varies                           |
| 4A. Key #450, Key #465, Key #467, Key #445, Key #446, Key #512 | Varies                           |
| 5. Key Non-Skid Additive (Fine Mesh)- optional                 | Varies                           |
| 5A. Key HTS Additive (240 Mesh)- optional                      | Varies                           |

Note: For areas exposed to direct sunlight, substitute Key #470 for Key #512-LV Bodycoat.

## IV. INSTALLATION

### A. Priming

Key Resin Company requires the use of Key #521 as a primer coat underneath the Key Zycke slurry to ensure consistent background color. Key Resin also 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 reduce outgassing and air bubbling in the finished system. This is very important with residential garage floors and other areas with significant temperature variation throughout the day, because rising temperature promotes concrete outgassing. If excessive moisture vapor emissions rate or moisture content exists, substitute Key Epocon SL or other Key Resin Moisture Vapor Control System as recommended.

1. Mixing **Key #521 Low Modulus Epoxy Primer**
  - 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. 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 mixed, immediately poured out in strips and backrolled in 30 minutes. Mixed material left in the pail longer than 5 minutes will have accelerated reaction and 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 160 ft<sup>2</sup> per gallon.
  - c. Back roll with a short nap roller.
3. Allow Primer to cure for 12 to 16 hours.

### B. Key Zycke Slurry Mixing and Application

**IMPORTANT:** Low spots, depressions and divots must be filled with pourable epoxy resin or epoxy paste to level the substrate before application of the Key Zycke bodycoat, or uneven settling of the Zycke filler may cause visible blemishes. This can be done before or after priming.

#### Mixing **Key #512-LV 100% Solids Epoxy**

- a. Thoroughly mix each component prior to combining.
- 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 mixing paddle.
- c. **Do not mix more material than can be used in 30 minutes.**
- d. While mixing, slowly add Key Zycke Decorative Filler, equal parts filler to resin by volume. **Important:** Avoid over-mixing resin + Zycke Filler, which will entrain air and cause pinholes to form in finish. Typical batch size: 1.5 gallons Key #512-LV + 1.5 gallons (18 lbs.) Key Zycke Decorative Filler, batch volume yield = 2.25 gallons slurry, batch coverage yield = 60-65 square feet.
- e. Apply mixed slurry material using a Kraft Tools\*\* ¼ inch V-notched metal rake at coverage rate of 30-35 ft<sup>2</sup>/gallon. This will yield about 45-50 mils dry film thickness. Immediately cross-roll with looped\* roller to eliminate rake lines. Allow to self-level and continue backrolling as needed with a looped\* roller. **Important:** Do not spread slurry with a trowel or separation of the chips and fines may occur, creating hazy spots or “waves” in the material.

\*Note: **Important:** Confirm looped roller consists of protruding loops and not compressed loops. Refer to photo comparison at end of this document. Protruding looped rollers available from Lowes, Midwest Rake, etc.

\*\*Note: Kraft Tool ¼” V-Notch Rake available for purchase from Key Resin or online at <http://www.krafttool.com>: 18” Steel ¼” double V-notch rake, part #GG605-01.

- f. To minimize marks in finished system, the contractor should wear "spiked" shoes while walking on wet material.
- g. Allow the material to cure 16 hours at 75 degrees F before sealing. Key #512-LV is slower curing than standard Key #512, before sealing be certain that the Key Zycke Slurry resin is hard enough to walk on without marring the surface. Note: Particular sealers (e.g., Key #470, Key #467-HS) require sanding/screening (60-80 grit) of the Key Zycke Slurry prior to application. This may require additional cure time of the Key Zycke Slurry to ensure it is hard enough to accept the weight of a buffer/sander and allow for sanding without causing excessive friction (making the sanding process more difficult).

*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. Sealer

Using **Key #470 Polyaspartic Topcoat**

Note: For alternative sealers, refer to the appropriate product data sheet for mixing and application instructions.

Note: Key #470 requires first sanding/screening the Key Zycke Slurry using 60-80 grit sand paper or abrasive screens.

#### **Key #470 Polyaspartic Polyurea Coating (Clear, Gloss)**

- a. Mixing
  - i. 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.
  - ii. Up to 15% solvent by volume (MEK, or VOC compliant solvent available from Key Resin) may be added to lengthen pot life and allow for application at 200-300 ft<sup>2</sup>/gallon.
  - iii. ***Do not mix more material than can be immediately poured out in ribbons, spread and backrolled in 15 minutes, unless 10%-15% MEK solvent is added which will increase pot life to 20+ minutes.***
- b. Application
  - i. Immediately pour material onto floor in a ribbon and spread using a squeegee, notched squeegee or trowel at a coverage rate of 100-200 ft<sup>2</sup>/gallon. This will yield 8-15 mils dry film thickness. Applying at a thinner application rate (except when solvent is added), over rolling, or back rolling too late MAY RESULT IN BUBBLING IN THE CURED FILM. "Dip and roll" procedure may be used if solvent is added.
  - ii. Immediately back roll gently with a short nap roller to even the surface texture of the coating. Application rate of >200 ft<sup>2</sup>/gallon will yield an "orange peel" appearance over a smooth basecoat.
  - iii. Allow material to cure 2-3 hours (at 75 degrees F) before applying a second coat. If cure time exceeds 6 hours, first coat **must** be lightly sanded or screened before applying second coat. If cure time exceeds 24 hours, first coat **must** be **thoroughly** sanded with before applying second coat.
  - iv. Do not open to light foot traffic for 2-3 hours (at 75 degrees F). Vehicle traffic in 24-48 hours depending on applied thickness and temperature. Full chemical cure and maximum chemical resistance and hot tire resistance are achieved in 48 hours.

Correct type of “protruding” looped roller.



Incorrect type!! Note “compressed” loops, this will entrain air into the resin.

