



Installation Instructions

Key Lastic Wall System

I. GENERAL INFORMATION

KEY LASTIC WALL SYSTEM is a multiple coat wall surfacing system. **KEY LASTIC WALL SYSTEM** provides a seamless wall to ceiling to floor surface that is easy to clean and maintain. Combining high impact and chemical resistance, **KEY LASTIC WALL SYSTEM** is the ideal wall system for use in commercial kitchens, clean rooms, operating rooms, and animal care facilities. **KEY LASTIC WALL SYSTEM** offers unique crack bridging capabilities and impact resistance normally associated with glass reinforced systems. Installed thickness is typically 20-40 mils. **KEY LASTIC WALL SYSTEMS** can be incorporated into seamless floor cove base applications.

II. SURFACE PREPARATION

Surface Preparation is the most critical portion of any successful resinous coating 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
- 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

The temperature and humidity conditions of the area to receive the coating system should be checked. An optimum room temperature of 75°F with a minimum wall temperature of 50°F is required for proper cure of the resin coating system. Concrete substrates may have a maximum 3% moisture content by mass.

KEY RESIN COMPANY recommends the following substrates for applications of **KEY LASTIC WALL SYSTEM**:

- A. Poured in place or Precast Concrete
- B. Concrete or Cinder Block
- C. Green Board
- D. Drywall
- E. Cement Plaster

Examine the substrate and clean or repair all bug-holes, efflorescence, laitance, cracks, joints and other surface irregularities. Mask all surfaces that require protection before beginning installation of the **KEY LASTIC WALL SYSTEM** making certain that all surfaces that can be damaged from overspray are covered.

III. MATERIAL QUANTITIES

A. Guideline System Requirements for 1000 ft²

	<u>Qty/1000 ft²</u>	<u>Coverage</u>
<u>Optional Block Fillers</u>		
Key #554 Epoxy Block Filler	8 gallons	+ 125 sq.ft./gallon
Or Key Polymeric Block Filler		80-150 sq.ft./unit as needed
<u>Primers</u>		
Key #532 Emulsion Primer	3 gallons	300 sq.ft./gallon
Or Key #502, 100% Solid Primer	4 gallons	250 sq.ft./gallon
<u>Flexible Epoxy</u>		
Key #580 WG Flexible Epoxy	5-8 gallons	125-200 sq.ft./gallon
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<u>Urethane Finish Coats</u>		
Key #420 W Pigmented 100% Solid Urethane	2.5-3 gallons	350-400 sq.ft./gallon
Key #420 W Pigmented 100% Solid Urethane	2.5-3 gallons	350-400 sq.ft./gallon
Or Key #446 Water Emulsion Urethane (pig.)	3 gallons	300-350 sq.ft./gallon
Key #446 Water Emulsion Urethane (pig.)	3 gallons	300-350 sq.ft./gallon
Or Key #450 Pigmented Urethane	3 gallons	300-350 sq.ft./gallon
Key #450 Pigmented Urethane	3 gallons	300-350 sq.ft./gallon

IV. INSTALLATION

A. Block Filler

When applying **KEY LASTIC WALL SYSTEM** on cementitious walls such as CMU, poured concrete, etc., a block filler will be necessary to properly fill and seal the surface. Key Epoxy Block Filler #554 or Key Polymeric Block Filler should be used. Follow application procedures for these materials when necessary.

1. Key #554 Epoxy Block Filler
 - a. Mix each component of Key Resin #554 prior to combining in the proper mixing ratio (1 part, Part A (resin) to 1 part, Part B (hardener) by volume).
 - b. Only mix what can be used in four to six hours.
 - c. Allow to stand 30 minutes and mix again.
 - d. Apply Key Resin #554 with a medium nap roller (³/₈-¹/₂ inch nap) or spray and back-roll at a coverage of 75-150 ft² per gallon. Two coats may be necessary to insure a uniform surface.
2. Polymeric Block Filler
 - a. Consult with Key Resin Technical Service for specific mixing instructions.
 - b. Pre-wet substrate before applying Key Polymeric Block Filler. Stiffer mixes of Key Polymeric Block Filler can be achieved using less water.
 - c. Apply by roller or brush.
 - d. Coverages may vary depending on substrate.

B. Priming

Key Resin Company recommends that every coating 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. Key #532 Emulsion Primer or Key #502, 100% Solid Epoxy Primer are the materials of choice.

1. Key #532 Emulsion Primer
 - a. Mix each component of Key Resin #532 prior to combining.

- b. Mix 2 parts Part A (resin) with 1 part Part B (hardener) and allow to stand 30 minutes before applying.
 - c. Roll mixed Key Resin #532 at a rate of 300-350 ft² per gallon with a short nap roller. Care should be taken to avoid puddles or runs. Do not build a film of the primer and roll out so that it soaks into the concrete.
 - d. Two coats of primer may be necessary to insure uniform wetting and coverage. The second coat may be applied over wet primer after it turns from cloudy to clear.
2. Key #502 Primer/Low Modulus Binder
 - 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. 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 used in 10-15 minutes. Mixed material left in the pail will have reduced working time.**
 3. Application
 - a. Roll primer onto the prepared wall surface.
 - b. Coverage varies depending upon porosity of substrate. Standard coverage rate is 250 ft² per gallon.
 4. Allow primer to sit for 8-12 hours. Base coat of wall system may be applied over primer up to twenty-four (24) hours after primer application.

C. Flexible Epoxy Base

1. Mixing Key #580 WG Flexible Epoxy Wall Coating
 - a. Stir each component prior to mixing.
 - b. Mix one (1) part 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.
2. Application
 - a. Apply a uniform coating to primed surface with ³/₈ inch nap roller at approximately 125-150 ft² per gallon to yield 10-12 mils evenly with no runs.
 - b. Roller application will leave a stipple finish. A final back-roll with a short nap roller (¹/₄ to ³/₁₆ inch) will reduce but not eliminate the stipple.
Allow to cure overnight before recoating.
 - c. Apply a second coat of Key #580 WG approximately 18-24 hours after the first application following the same procedure as before.
Roller application may require a light sanding such as a pole sander with an open screen to remove lint, runs, or other debris prior to application of finish coats.
Allow to cure overnight prior to recoating.

D. Urethane Finish Coats – 2 Coats

Key Resin offers three options for urethane finish coats to provide excellent performance and ease of handling. Refer to project specifications or consult with Key Resin for recommendations.

1. Key #420 W Pigmented 100% Solids Aliphatic Urethane (Gloss)

- a. Mixing
 - i. Thoroughly mix each component prior to combining.
 - ii. Mix one (1) part 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 20-30 minutes. Do not leave mixed material in the pail for more than 10 minutes or working time will be reduced.**

- b. Application
 - i. Apply at a spread rate of 350-400 sq.ft. per gallon (or specified coverage rate) evenly with no runs. "Dip and roll" procedure works well with small batches, use within 20-30 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 overroll or rapidly roll the Key #420 Urethane.
 - iii. Allow material to cure 12 to 24 hours (at 75 degrees F) before applying a second coat.
 - iv. Do not open to light dry contact for 24 hours. Exposure to liquids or cleaning requires 48 hours cure. Full chemical cure and maximum resistance are achieved in seven (7) days.
- 2. Key #446 Water Based Aliphatic Pigmented Urethane (Gloss)**
- a. Mixing
 - i. Thoroughly mix each component prior to combining.
 - ii. Mix four (4) 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. Allow material to sit for 15-20 minutes for viscosity adjustment (it will initially increase then decrease). **DO NOT ADD WATER or NMP solvent unless approved by Key Resin Technical Service. If approved, up to 5% (by volume) water may be added.**
 - iii. ***Do not mix more material than can be used in two hours.***
 - b. Application
 - i. Apply at a coverage rate of 300-350 ft²/gallon. This will yield 1.5-2 mils dry film thickness. A thicker application rate MAY RESULT IN BUBBLING IN THE CURED FILM.
 - ii. Dip and roll procedure works well due to the extended pot life. Maintain a wet roller at all times, do not dry roll or apply too thin (greater than 400 ft²/gallon) to reduce occurrence of roller marks, lap marks or "skippers". Back roll with a short nap roller to even the surface texture of the coating. When rolling back into previous batch of material, do not exceed 15 minutes from the time the previous batch was placed or lap marks may occur. If crossrolling, do so immediately after backrolling.
 - iii. Allow material to cure 10 hours (at 77 degrees F) before applying a second coat. Two coats are necessary for consistent appearance, superior protection against wear, impact, and chemical attack.
 - iv. Do not open to light dry contact for 24 hours. Exposure to liquids or cleaning requires 48 hours cure. Full chemical cure and maximum resistance are achieved in five (5) days.
- 3. Key #450 Aliphatic Pigmented Urethane (Gloss)**
- 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. Apply at a spread rate of 300-350 sq.ft. per gallon (or specified coverage rate) evenly with no runs. "Dip and roll" procedure works well with small batches, use within 60-90 minutes. This will yield 3 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 (also MEK, xylene) 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 dry contact for 24 hours. Exposure to liquids or cleaning requires 48 hours cure. Full chemical cure and maximum resistance are achieved in five (5) days.