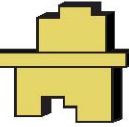




KEY RESIN COMPANY

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Installation Instructions

Key #544 Epoxy Wall Coating System

I. GENERAL INFORMATION

KEY #544 is a bisphenol A epoxy wall coating system. **KEY #544** provides a seamless wall to ceiling to floor surface that is easy to clean and maintain. Combining cleanability and chemical resistance, **KEY #544** is the ideal wall system for use in commercial kitchens, clean rooms, operating rooms, and animal care facilities. Depending on specific project requirements, installed thickness of **KEY #544** ranges from 20 to 40 mils. Fiberglass cloth reinforced wall systems are also available from **KEY RESIN COMPANY**. **KEY #544** can be incorporated into seamless floor cove base applications. Consult your **KEY REPRESENTATIVE** for specific instructions.

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 #544**:

- 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, remove, repair or fill all bug-holes, efflorescence, laitance, cracks, butt joints and other surface irregularities, protrusions or contaminants (such as form release oil). Substrate finish will telegraph through the final appearance of the wall coating.

Mask all surfaces that require protection before beginning installation of **KEY #544** making certain that all surfaces that can be damaged from splatters are covered.

III. MATERIAL QUANTITIES

A. Guideline System Requirements for 1000 ft²

<i>Key #544 Wall Coating System</i>	<i>Qty./ 1000 ft²</i>
*1. Key #502-F Primer/Low Modulus Binder Fast Cure	4 gallons
*1. Key 554 Epoxy Block Filler (1-2 coats) (if specified)	8-13 gallons per coat
2. Key #544 100% Solids Epoxy Wall Coating	5-6 gallons
3. Key #544 100% Solids Epoxy Wall Coating	5-6 gallons
4. Key #544 100% Solids Epoxy Wall Coating**	5-6 gallons
5. Key #420/#445/#446/#450/#467/#470 Urethane (optional)***	varies

*Note: Refer to project material specifications to select primer or block filler as specified.

Quantity and number of coats of block filler will depend on porosity of substrate and desired finished appearance.

Note: Refer to project material specifications for specific total system thickness. **Important: certain light colors (e.g., White Sand, White, Taupe) may require additional applied thickness (30 mils minimum) to achieve proper pigment hiding.

***Note: Pigmented urethane sealer should be considered for areas with strong UV spectrum lighting, particularly with white and other light colors. White and light colored epoxy may yellow gradually when exposed to UV spectrum light.

IV. INSTALLATION

A. Priming (Note: Key #502-F Primer may be deleted if Key #554 Epoxy Block Filler is used)

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.

1. Mixing **Key #502-F Primer/Low Modulus Binder Fast Cure**
 - 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 20 minutes. Important: Do not let mixed material sit in mixing pail longer than 5-10 minutes or reduction in working time will result.**
2. Application
 - a. Roll primer onto the prepared wall surface.
 - b. Coverage varies depending upon porosity of substrate.
3. Allow primer to sit for 4 hours. Base coat of wall system may be applied over primer up to ten (10) hours after primer application. For next day applications, use 502 Regular Cure.

B. Block Filler

Important: Only Key #554 Epoxy Block Filler, Key #553 Epoxy Skim Coat, or approved polymeric cement block filler may be used with Key #544 Epoxy Wall Coating System. Do NOT use latex block filler or bond failures may occur. Note: Key #554 Epoxy Block Filler is solvent based, which may not be suitable for occupied facilities.

Two applications of Key #554 Epoxy Block Filler will fill small voids and crevices to provide a smooth, even surface for coating.

1. Mixing **Key #554 Polyamide Epoxy Block Filler**
 - a. Thoroughly mix each component prior to combining.

- b. Mix one (a) 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.
 - c. Allow to stand 30 minutes and mix again.
 - d. **Mix only the amount of material that can be used in 4-6 hours.**
2. Application
 - a. Roll block filler onto the prepared wall surface using a 3/8"-1/2" nap roller.
 - b. Coverage rate is typically 75 to 125 ft² per gallon per coat and will vary depending upon porosity of substrate and desired finish appearance. Two coats may be necessary to insure a uniform surface. Thicker applications may leave a significant stipple texture, this can be eliminated after curing for several hours using a trowel (keep trowel clean with anhydrous 99% isopropyl alcohol).
 3. Allow **Key #554** to cure for 24-72 hours (at 75 degrees F) depending on application thickness before recoating or topcoating with **Key #544 100% Solids Epoxy Wall Coating**.

C. Top Coats

1. Mixing **Key #544 100% Solids Epoxy Wall Coating**
 - 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 the amount of material that can be used in 40-50 minutes.**
2. Application
 - a. Apply **Key #544** to primed or filled surface with high quality 1/2" nap roller (to avoid nap hairs in finish) at approximately 160 ft² per gallon per coat.
 - b. Allow to cure 8-12 hours at 75 degrees F. before recoating.
 - c. All surface irregularities in the cured top coat should be sanded prior to application of additional top coat(s). Final finish will have a slight orange peel texture. **Important:** certain light colors (e.g., White Sand, Sand, Taupe) may require additional applied thickness (30 mils minimum) to achieve proper pigment hiding.
 - d. Allow final top coat to cure a minimum of three (3) days at 75 degrees F. before opening for use or cleaning.

Optional Urethane Sealer: Refer to separate product installation instructions for the selected sealer.