Installation Instructions

KeyGlas Epoxy Wall System

I. GENERAL INFORMATION

KEYGLAS is a fiberglass reinforced epoxy wall coating system. **KEYGLAS** provides a seamless wall to ceiling to floor surface that is easy to clean and maintain. Combining high impact and chemical resistance, **KEYGLAS** is the ideal wall system for use in commercial kitchens, clean rooms, operating rooms, correctional facilities and animal care facilities. Depending on the weight of fiberglass used, installed thickness of **KEYGLAS** ranges from 25 to 40 mils. **KEYGLAS** 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 75ºF with a minimum wall temperature of 60ºF 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 **KEYGLAS**:

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

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. Use epoxy resin in a paste consistency to fill nail holes, butt joints or voids of any type. Mask all

surfaces that require protection before beginning installation of **KEYGLAS** making certain that all surfaces that can be damaged from overspray are covered.

III. MATERIAL QUANTITIES

A. Guideline System Requirements for 1000 ft²

KeyGlas (Fiberglass Reinforced Wall Coating System)	*Qty./ 1000 ft²*
*1. *Key #502-F* Primer/Low Modulus Binder Fast Cure	4 gallons
*1. *Key #554 Epoxy Block Filler (1-2 coats)*	8-13 gallons per coat
*1. *Key #553 100% Solids Epoxy Skim Coat Block Filler (1-2 coats)*	varies
2. *Key #544* 100% Solids Epoxy Wall Coating	5 gallons
3. *Key Fiberglass Cloth* (5.7 oz)	1000 ft²
(Other options depending on project specs: Scrim Cloth, Chopped Strand Mat)	
4. *Key #544* 100% Solids Epoxy Wall Coating	5 gallons
5. *Key #544* 100% Solids Epoxy Wall Coating**	5 gallons

*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, Sand, Taupe) may require additional applied thickness (30 mils minimum) to achieve proper pigment hinding, or to hide fiberglass cloth texture if desired.

IV. INSTALLATION

A. Priming (Note: Key #502-F Primer may be deleted if Key #554 or #553 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. With “dip and roll” application procedure, do not mix more material than can be applied within 10-15 minutes, as working time will be shortened when mixed material sits in the mix pail.
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, or until tack free. Base coat of wall system may be applied over primer up to ten (10) hours after primer application.

B. Block Filler

Important: Only Key #554 Epoxy Block Filler, Key #553 Epoxy Skim-Coat Block Filler or approved polymeric cement block filler may be used with KeyGlas System. Do not use latex block filler or bond failures may occur.

Two applications of Key #554 Epoxy Block Filler will fill small voids and crevices to provide a smooth, even surface for coating. Important: Key #554 is solvent-based. For low odor requirements refer to Key #553 data sheet for mixing and application details.

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.
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. Base Coat

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.
2. Application
   a. Apply a uniform coating to primed surface with ½" nap roller at approximately 200 ft² per gallon.
   b. Hang **KEY FIBERGLASS CLOTH** into wet surface using wallpaper-hanging techniques. Carefully butt edges of cloth panels or overlap edges 1” and double-cut and removing excess trim.

A broad knife can be used to remove air pockets and wrinkles in the fiberglass cloth during installation. Use a spring steel trowel or plastic trowel to press material into fiberglass and fully saturate fiberglass.

   c. Apply a second coat of ***Key #544*** approximately 2 hours after hanging fiberglass. Be sure to fully embed the fiberglass in the base coats.
   d. Allow to cure overnight.

C. Grouting

All surface irregularities in the cured body coat should be sanded and/or filled prior to application of finish coat(s).

D. Sealing

After application of base and grout coats, sand wall surface smooth and repair all remaining defects in wall surface prior to sealing.

Using ***Key #544*** **100% Solids Epoxy Wall Coating**

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.
   iii. ***Do not mix more material than can be used in 30 minutes.***
b. Application
   i. Roll or spray mixed ***Key #544*** to cured and sanded wall surfaces to obtain uniform coverage and texture.
   ii. Successive coats may be necessary to achieve appropriate texture. Always sand wall surface between applications of finish coats. ***Important:*** certain light colors (e.g., White Sand, Sand, Taupe) may require additional applied thickness (30 mils minimum) to achieve proper pigment hinding.
   iii. Use high quality roller covers to prevent nap hairs in finish.

iv. Allow to cure a minimum of three (3) days before opening for use. Five days required for full chemical cure if subjected to splash/spills or liquid cleaning process.
v. Finish will have an orange peel texture.