KEY RESIN COMPANY
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Installation Instructions

Key Industrial Wear Surface (IWS)

18-20 Mil Epoxy Coating System

I. GENERAL INFORMATION

KEY IWS EPOXY COATING SYSTEM is a high-build epoxy coating system filled with Key Self-Leveling Filler to provide additional wear resistance and a very light texture. Contact your **KEY REPRESENTATIVE** for assistance with proper resin choice for specific performance criteria.

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
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. Moisture content or moisture vapor emissions of the concrete

Also, the temperature and humidity conditions of the area to receive the flooring system should be checked. An optimum room temperature of 75ºF with a minimum slab temperature of 60ºF is required for proper cure of the resin flooring system.

III. MATERIAL QUANTITIES

KEY IWS EPOXY COATING SYSTEM coverage rates depend upon desired total film thickness. Typical coverage rates are outlined below for a two coat system.

1.	*Key #502 Epoxy Primer*	160-200 ft²/gallon	5-6 gallons
2.	*Key Self-Leveling Filler* *(added to Key #502)*	25 lbs.	
3.	*Key #520 Epoxy Coating*	160-200 ft²/gallon	5-6 gallons
4.	*Key Self-Leveling Filler* *(added to Key #520)*	25 lbs.	
5.	*Key Non-Skid Additve* *(optional for added texture)* (added to final topcoat resin during mixing procedure)	6-12 ounces(by volume)/gallon resin	

Note: For areas requiring greater chemical resistance, substitute Key #625 or Key #630 for Key #520.

IV. INSTALLATION

A. Key #502 Primer/Low-Modulus Binder

1. Mixing
   a. Stir each component prior to mixing.
   b. Mix two (2) parts by volume of Part A (Base) with one (1) part by volume of Part B (Hardener) for two (2) minutes with a low speed electric drill mixing paddle.
   c. Continue mixing and slowly add Key Self-Leveling Filler powder, at rate of 4-5 lbs. per gallon (1 to 1.5 quarts). Continue mixing for 1-2 additional minutes to fully disperse powder.
   d. ***Mix only that amount of material that can be poured out in ribbons within 5 minutes and spread/backrolled within 40 minutes. Do not leave mixed material in the pail for longer than 5 minutes or working time will be reduced significantly.***

2. Application
   a. Pour primer in ribbons onto the prepared concrete.
   b. Spread with a notched squeegee to a coverage of 160 to 200 ft² per gallon.
   c. Immediately back roll with a short nap (1/4”-3/8”) roller.
   d. Allow primer to cure 8-12 hours prior to re-coating, depending on temperature. A fast cure formulation is available to reduce re-coat window to 4-8 hours, also a cold cure formulation for applications below 50 degrees F, or for very rapid recoat time of 2-3 hours at 75 degrees F. If primer is to be allowed to sit for prolonged periods (longer than 24 hours), broadcast lightly with dry silica sand.

B. Key #520 Epoxy Coating

Note on Creating Additional Texture: The IWS System as outlined above will create a very light texture, though it may not be adequate for wet areas. Key Non-Skid Additive (80/100 mesh or 20/30 mesh) or White Aluminum Oxide (80 mesh or 240 mesh) may be blended with the epoxy resin used for the final topcoat to create a more prominent textured finish. It is also optional to broadcast 30 mesh or 40-60 mesh sand to excess into the Key #502 application, additional Key #520 will be needed to seal out the sand, assume about 80-100 sq. ft. per gallon. If Key Non-Skid Additive is used, a typical mix design ranges from 6-12 ounces (by volume) per mixed gallon of resin depending on coating film thickness and texture desired. Experiment with samples to confirm the texture you want to achieve. When using the aluminum oxide, be sure to keep the grit frequently stirred up in the resin unless all of the resin is poured out immediately. You may also lightly broadcast the grit into the final topcoat and back roll it, but be careful to maintain a very consistent procedure or the texture will vary significantly. Consult with Key Resin for additional recommendations.

1. Mixing
   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 two (2) minutes with a low speed electric drill mixing paddle.
   c. Continue mixing and slowly add Key Self-Leveling Filler powder, at rate of 4-5 lbs. per gallon (1 to 1.5 quarts). Continue mixing for 1-2 additional minutes to fully disperse powder.
   d. ***Do not mix more material than can be poured out in ribbons within 5 minutes and spread/backrolled within 20-25 minutes. Do not leave mixed material in the pail for longer than 5 minutes or working time will be significantly reduced!***

2. Application
   a. Pour material onto floor in ribbons and spread with a notched squeegee to a coverage of 160-200 ft² per gallon (or specified coverage rate). This will yield 8-10 mils dry film thickness.
   b. Immediately back roll with a short nap (1/4”-3/8”) roller to even the surface texture of the coating. Do not over roll the coating or roll too rapidly.

c. Allow material to cure 12 to 16 hours if applying an optional second coat.
d. Do not open to light foot traffic for 24 hours at 75 degrees F, light vehicle traffic for 48-72 hours. Full chemical cure and maximum resistance are achieved in five (5) days.