



# Installation Instructions

## Key Vinyl Ester 45-60 mil Coating

### I. GENERAL INFORMATION

**KEY VINYL ESTER COATINGS** are high performance coating systems that consist of **KEY VINYL ESTER** resin. **KEY VINYL ESTER COATINGS** produce a finish that will minimize chemical penetration and provide maximum protection from chemical attack.

### 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

Also, the temperature and humidity conditions of the area to receive the flooring system should be checked. **DO NOT ATTEMPT APPLICATION IF SUBSTRATE TEMPERATURE IS WITHIN 5°F OF DEW POINT OR IF RELATIVE HUMIDITY IS GREATER THAN 85%**. An optimum room temperature of 75°F with a minimum slab temperature of 50°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 Vinyl Ester Coating System</i>	<i>Qty./ 1000 ft<sup>2</sup></i>
1. <i>Key Vinyl Ester Primer</i>	6 gallons
2. <i>Key Vinyl Ester Binder/Coating</i>	12 gallons
3. <i>Broadcast Sand 30 mesh</i>	400 pounds
4. <i>Key Vinyl Ester Binder/Coating (grout)</i>	12 gallons
5. <i>Key Vinyl Ester Binder/Coating (seal)</i>	12 gallons

## IV. INSTALLATION

### A. Priming

**Key Vinyl Ester Primer** must be used prior to applying the **Vinyl Ester Coating System**. Before priming, make sure the floor has been properly prepared and is thoroughly dry. Any patching or filling should be done at this time. When patching an area to be covered with Vinyl Ester, it is best to use a patching mix consisting of Key Vinyl Ester Binder (catalyzed) and blended aggregate.

1. Mixing
  - a. Thoroughly mix each component prior to combining.
  - b. Mix 3.0 to 4.0 ounces of Part B (Catalyst) per gallon of Part A (Resin) with a low speed electric drill mixing paddle. This ratio can be varied slightly to suit temperature and cure conditions.
2. Application  
Spread primer thinly but evenly on substrate or on base area with a paint roller or brush.
3. Allow the material to cure overnight. Do not recoat while primer is still tacky. If more than 48 hours pass before recoating, lightly sand and solvent wipe area before topping.

**Caution!** **Key Vinyl Ester Binder and Key Vinyl Ester Coating emit fumes, which are non-toxic but can be irritating to the eyes and nose. To prevent this irritation, any working area should be well ventilated.**

**Note:** *As specified in the general specifications to the architect, the general contractor is responsible for providing ventilation and he should have made certain that such fumes will not enter any air conditioning ducts and that any food stuffs or other absorbent materials are removed. If this has not been done, it is the applicator's responsibility to insure that the "general" has followed the architect's specifications.*

### B. Intermediate Coat

1. Mixing **Key Vinyl Ester Binder/Coating**
  - a. Thoroughly mix each component prior to combining.
  - b. Mix 3.0 to 4.0 ounces of Part B (Catalyst) per gallon of Part A (Resin) with a low speed electric drill mixing paddle. This ratio can be varied slightly to suit temperature and cure conditions.
2. Application
  - a. Pour mixed material onto sanded and swept surface.
  - b. Spread with either a flat trowel or squeegee at a coverage rate of 80 ft<sup>2</sup> per gallon forcing material tightly onto the surface.
  - c. Back roll with a short nap roller.
3. Allow the material to cure 8-10 hours prior to recoat.

**Note:** *Should any patching be required because of failure of initial adhesion (due to earlier undetected moisture or contaminants), this can be readily accomplished. The area to be repaired should be “cut-out”. If the required patch is made because of lack of adhesion, the basic reason should be determined and corrected at this time. After proper preparation, new material is placed in the area and trowelled.*

### C. Broadcast

A Silica Sand or Aluminum Oxide broadcast is recommended to further enhance the impact resistance and slip resistance. The primer must first be tack free then broadcast into the first **Vinyl Ester Binder/Coating** step.

Properly catalyze **Key Vinyl Ester Binder/Coating** (3-4 liquid ounces per gallon) and spread on the floor at 80 square feet per gallon. Broadcast the silica sand or aluminum oxide to refusal into the wet resin. After allowing 8 hours for cure, the excess broadcast media can be removed and grout and seal coats of **Key Vinyl Ester Binder/Coating** can be applied as described above. By varying the spread rate, the aggressiveness of the broadcast surface can be altered.

### D. Grouting

1. Before applying grout coat, scrape the surface of the hardened topping with a flat trowel to dislodge any sharp edges on the surface. These are swept up before grouting.
2. Mixing **Key Vinyl Ester Binder/Coating**
  - a. Thoroughly mix each component prior to combining.
  - b. Mix 3.0 to 4.0 ounces of Part B (Catalyst) per gallon of Part A (Resin) with a low speed electric drill mixing paddle. This ratio can be varied slightly to suit temperature and cure conditions.
  - c. **Material must be applied within 20 minutes after mixing.**
3. Application of **grout coat**
  - a. Pour mixed material onto sanded and swept surface.
  - b. Spread with either a flat trowel or squeegee at a coverage rate of 80 ft<sup>2</sup> per gallon forcing material tightly onto the surface.
  - c. Back roll with a short nap roller.
4. Allow to cure 5-8 hours before recoat.

### E. Sealing

1. Sand the grouted coating with a rotary sander using medium grit paper. This will remove any ridges left in the grout, level out any trowel ridges, and remove any particles that may have lodged on the surface.
2. Clean the floor by sweeping or vacuuming and solvent wiping with acetone or xylene to further remove sanding dust.
3. Catalyze **Key Vinyl Ester Binder/Coating** as described above.
4. Apply catalyzed material with roller at a spread rate of 80 square feet per gallon.
5. Do not open to light traffic for 24 hours. Full chemical cure and maximum resistance are achieved in five (5) days.