



Installation Instructions

KEY VINYL ESTER SLT

I. GENERAL INFORMATION

KEY VINYL ESTER SLT SYSTEM is a 3/16" high performance flooring system that consists of **KEY VINYL ESTER** resin. **KEY VINYL ESTER SLT** produces a textured finish that will provide maximum protection from chemical attack and excellent durability to heavy traffic.

II. SURFACE PREPARATION

Surface Preparation is the most critical portion of any successful resinous flooring system application. All substrates must be properly prepared to a minimum surface profile of CSP-3 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 ft²

<i>Key Vinyl Ester SLT System (3/16")</i>	<i>Qty./ 1000 ft²</i>
1. <i>Key Vinyl Ester Primer</i>	4-6 gallons
1A. <i>Key Universal Primer</i>	4 gallons
2. <i>Key Vinyl Ester Binder/Coating</i>	33 gallons
3. <i>Key Self-Leveling Filler</i>	1000 pounds
4. <i>Key Broadcast Sand (30 mesh)</i>	800 pounds
5. <i>Key Vinyl Ester Binder/Coating (grout)</i>	12 gallons
6. <i>Key Vinyl Ester Binder/Coating (seal coat)(may be optional)</i>	5-10 gallons

IV. INSTALLATION

A. Priming

Key Vinyl Ester Primer must be used prior to applying the **Key Vinyl Ester SLT System**. Alternatively **Key Universal Primer** may be used, or if applying over existing cured epoxy system, **Key Universal Primer** MUST be used as a barrier primer, applied in two coats and pinhole-free. 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/Coating (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.
 - c. **Material must be applied within 20 minutes after mixing.**
2. Application
 - a. Pour mixed material onto clean, dry, properly prepared surface.
 - b. Spread with a squeegee at a coverage rate of 160-250 ft² per gallon.
 - c. Back roll with a short nap roller.
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 Primer and Key Vinyl Ester Binder/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 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. Slurry/Broadcast Body 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.
 - c. Continue mixing while slowly adding **Key Self-leveling Filler** to the premixed **Key Vinyl Ester Binder/Coating**. Mix ratio of filler to resin is approximately 30 pounds (2 gallons) filler to 1 gallon mixed resin. This batch size will yield approximately 2.25 gallons of mixed slurry.
 - d. Continue mixing resin/filler for 3 to 4 minutes or until material is blended to a uniform consistency. The mix has the appearance of "pancake batter."
 - e. **Material must be applied within 20 minutes after mixing.**
2. Application
 - a. Place slurry mixture on primed surface and spread at coverage rate of 13-15 ft² per gallon using flat trowel, gauge rake, 1/2" V-notched trowel, 1/2" V-notched squeegee, or 1/2" V-notched metal rake, pulling the material toward you in a "figure-8" pattern. Leave a "wet line" or puddle of material between batches to avoid "knit-lines" in the finished system.
 - b. Back-roll system with a spiny roller while material is still wet. To minimize marks in finished system, the contractor should wear "spiked" shoes while walking on wet material.

- c. Allow the material to level for approximately 5-10 minutes. If surface or room temperatures are below 70°F, some of the self-leveling filler can be left out of the mix to improve fluidity of the mix. Slab and room temperature should be maintained at 70°F for best results.
3. Broadcast to Excess
Broadcast Key Broadcast Sand (30 mesh) into the wet slurry until the surface of the system appears dry. Be careful not to clump the material or produce high spots. Approximately 80 pounds of sand will be needed for 100 ft² of flooring. Remember to only walk on the wet surface while wearing “spiked” shoes! Do not walk on floor after broadcasting.
4. Allow the broadcast floor to cure 5-8 hours, depending on temperature and amount of catalyst used. Sweep excess sand with a stiff bristled broom and/or power vacuum.

C. 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, or lightly sand. Sweep/vacuum 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/vacuumed surface.
 - b. Spread with either a flat trowel, squeegee or notched squeegee at a coverage rate of 80 ft² per gallon forcing material tightly onto the surface.
 - b. Back roll with a short nap roller.
4. Allow to cure 5-8 hours before recoat.

D. Sealing

Note: Sealing may be optional depending on matching approved sample or project specifications.

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. Note: This step may be deleted if determined not to be necessary.
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 as described above at a spread rate of 100-200 square feet per gallon as needed to match approved sample or project specifications.
5. Do not open to light foot traffic for 24 hours. Full chemical cure and maximum resistance are achieved in five (5) days.