



KEY RESIN COMPANY

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Installation Instructions

KEY URECON SL

I. GENERAL INFORMATION

URECON SL is a three component, self-leveling urethane-modified cementitious topping designed to protect concrete substrates from chemical corrosion, abrasion, impact and thermal shock. No sealer is required with Urecon SL, unless specified for cleaning or aesthetic purposes or for additional chemical resistance. A prime coat of Urecon SC is recommended with Urecon SL to reduce the potential for outgassing craters/holes. The wearing surface for Urecon SL is smooth and easily cleaned under most process conditions

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. An optimum room temperature of 75°F with a minimum slab temperature of 55°F is required for proper cure of the resin flooring system.

III. SPECIAL CONDITIONS

Do not apply in temperatures below 45°F, above 85°F, or if relative humidity is above 85%. To extend working time in hot temperatures, consider cooling the part I and II resin components in ice water or other cold storage. Do not apply to sand-cement screeds (tile setting bed mortars), asphaltic substrates, glazed tile or brick (unless glaze is mechanically abraded), copper, aluminum, softwood, or existing coatings of epoxy, polyester, or urethane. Do not apply to wet concrete or to polymer modified concrete with a moisture content above 10%. Do not apply to concrete if air temperature is within 5°F of dew point. Do not featheredge application or mix material by hand.

IV. MATERIAL QUANTITIES

Coverage

One unit of URECON SL contains 1 gallon URECON Part I, 1 gallon URECON Part II, and 44 pounds URECON SL Part III.

Unit yields: 20 ft² at 1/4", 30 ft² at 3/16", 40 ft² at 1/8"

One unit of URECON SC contains 1/2 gallon URECON Part I, 1/2 gallon URECON Part II, and 7 pounds URECON Filler Powder Part III. URECON Filler Powder is packaged as a 50 pound bag and must be weighed out in 7 pound portions at the jobsite or measured out by volume. 7 pounds of filler powder is approximately 1 gallon by volume.

Unit yields: 12 mils at 100 ft² per unit

V. INSTALLATION

Self-Leveling Floor

Note: If cove base is specified, use Key Urecon CV or Key 510-CV for solid color or Key Chip 100 finish or Key Quartz Cove Base Mortar (Key 510-CV epoxy binder) for Key Urecon SLT Quartz System. Trenches should be lined with Key Urecon CV.

Note for Urecon SL System: Prime with Urecon SC (100-125 ft²/kit) to reduce outgassing pinholes in Urecon SL bodycoat. Allow Urecon SC to cure minimum 6 hours before applying Urecon SL.

Recommended application between temperatures between 50°F and 70°F with relative humidity below 85%. Mechanical mixing is required. A ten-gallon KOL Mixal and paddle is recommended (a 3/4 horsepower drill and "jiffy" mixer can also be used with a 6 gallon pail).

1. Mixing **URECON SL**

- a. Add equal parts of Part I and Part II to mixer and blend for 30 seconds. Add the pigment pack (except for neutral color used with quartz) to the Part I prior to mixing.
- b. Add Part III slowly to the mix (while mixer is running) and allow to blend for 3-4 minutes. Be sure to "wet-out" all parts of mix, scraping sides and bottom of mixer during mixing. All powder must be uniformly blended with no visible lumps of dry powder. Mixing bucket and mixer or blades should be scraped out thoroughly and cleaned with solvent (acetone, MEK or xylene) every few batches or working time on subsequent batches may be shortened. If mixing in a plastic bucket, dispose of bucket after every 3-4 mixes and replace with a clean bucket.

Set up mixing station as near to the work area as possible. Exothermic heat will be generated and flash setting may occur if material remains in the pail too long. Do not mix more than can be used in 10 minutes.

2. Application

- a. Place mixture on floor and spread with a gauged straight edge (gauge rake set 1/16" higher than desired thickness), flat trowel or 1/2" V-notch trowel (for application rate of 40 ft²/kit). A "V-notched" trowel will not level without a loop roller. Leave a "wet line" or puddle of material between batches to avoid "knit-lines" in the finished system. Maximum working life is 15 minutes at 70 degrees F, less than 10 minutes at 80+ degrees F. Cooling the resin components prior to use is an effective method in very warm temperatures to extend working time
- b. Back-roll the surface lightly with a loop roller while material is still wet. To minimize marks in the finished system, the contractor should wear "spiked" shoes while walking on wet material.
- c. Urecon SC topcoat (Optional):

1. Mixing **URECON SC**

- a. Add equal parts of Part I and Part II to mixer and blend for 30 seconds. Add the pigment pack (except for neutral color) to the Part I prior to mixing.
- b. Weigh out 7 pounds (about 1 gallon) of Part III powder and add slowly to the mix (while mixer is running) and allow to blend for 3-4 minutes. Be sure to

"wet-out" all parts of mix, scraping sides and bottom of mixer during mixing. All powder must be uniformly blended with no visible lumps of dry powder.

2. Application

a. Place mixture on floor and spread with a squeegee to a coverage rate of 100 ft²/kit (or as otherwise specified) and immediately backroll lightly with a loop roller. Do not backroll the material excessively.

b. Leave a "wet line" or puddle of material between batches to avoid "knit-lines" in the finished system. Maximum working time is 10-15 minutes at 70-75 degrees F, less than 10 minutes at 80+ degrees F.

Termination points at the end of the day should be made at doorways, expansion joints, etc. If it is not possible to terminate at these points, 2" masking tape should be placed in a straight line at the ending point. Carefully trowel the material up to and slightly over the inside edge of the tape. Allow material to cure for about thirty (30) minutes and remove the tape.

3. Terminations, Crack Repair, Joint Treatments

a. All free edges (perimeters, terminations adjoining cove base or control/expansion joints, or along gutters or drains) require "keyed in" extra anchor to distribute mechanical and thermal stresses. This can be achieved using a chipping hammer or saw.

b. All expansion joints must be exposed through the system. Control joints (sawcuts) and cold joints should also ideally be exposed through the Urecon system but may be overlaid if the facility owner accepts that future telegraphing cracks may develop if expansion/contraction movement occurs in the substrate joint. To overlay a control joint, fill with rigid epoxy (e.g., Key Crack Filler #715), Urecon SL or Urecon SC. Consult with Key Resin Technical Services on use of flexible epoxy crack isolation membrane as a surface treatment over filled control joints and cold joints. Do not overlay expansion joints.

c. Cracks: route cracks larger than 1/16" and fill with rigid epoxy (e.g., Key Crack Filler #715 SFC), Urecon SL or SC and reinforce with minimum 12" wide fiberglass cloth. Consult with Key Resin Technical Services on use of flexible epoxy crack isolation membrane as a surface treatment over filled cracks.