



# Installation Instructions

## Key Urecon TG

### I. GENERAL INFORMATION

**KEY URECON TG** is a urethane cement resin flooring system consisting of urethane resin, cement, lime and aggregates which provide heavy-duty protection at 1/4" to 3/8". **KEY URECON TG** has high impact resistance and excellent thermal shock and chemical resistance. **KEY URECON TG** may optionally be sealed with various topcoats as necessary for specific chemical resistance, aesthetics, or as required by project specifications.

### 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 ([www.icri.org](http://www.icri.org)) 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 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>	1/4 inch	3/8 inch
1. <i>Key Urecon TG</i>	56 kits	84 kits

#### B. Recommended Batch Quantities

1. 1 kit: 1/2 gallon part A + 1/2 gallon part B + 45 pounds aggregate blend  
**Estimated Batch Coverage: 18 ft<sup>2</sup> at 1/4", 12 ft<sup>2</sup> at 3/8"**  
*Do not mix partial kits*  
A 10 gallon KOL Mixal is recommended, a 5 gallon size will also work.

## IV. INSTALLATION

### A. Priming

No primer required under normal circumstances.

### B. Troweled Mortar

1. Mixing **Key Urecon TG Resin & Aggregate**
  - a. Add Part I and Part II to mixer and blend for 30 seconds. **Important:** Do not overmix or working time will be significantly reduced.
  - b. Add Oxide Pigment Pack and Part III aggregate slowly to the mix (while mixer is running) and allow to blend for 1-2 minutes. Only mix as long as needed to completely "wet-out" aggregate or working time will be significantly reduced. 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 will be shortened. If mixing in a plastic bucket, dispose of bucket after every 2 mixes and replace with a clean bucket for this reason. **Important:** Do not overmix or working time will be significantly reduced.
  - c. Working time of one mix is approximately 10-15 minutes at 70-75 degrees F. To extend the working life in very warm temperatures, cool the resin components prior to use by placing resin units in ice filled containers or air conditioned storage.
2. Application
  - a. Place mortar mixture on concrete surface and spread with flat steel trowel (recommended 3" x 12") to a thickness of 1/4 or 3/8 inch. Using considerable top pressure on trowel, spread material from side to side, push back into the previous mix(wet edge), pull forward to establish the thickness. With lighter pressure, trowel from side to side to close up.
  - b. The last few strokes should always be in one direction only, left to right or right to left, but never back and forth.
  - c. Excessive troweling will bring resin to the surface or reduce the anti-slip surface.
  - d. As an option, consider lightly backrolling surface with a loop roller or short nap roller dipped in solvent or alcohol, to even out the finished appearance or hide knit lines. Lightly broadcasting color quartz or aluminum oxide granules and backrolling with a short nap roller to wet out the aggregate will increase texture for very wet areas, though aggregate may tend to break loose with traffic over time.
3. Allow the troweled mortar to cure a minimum 6-8 hours for light foot traffic, 8-10 hours for general service operation, and 16-24 hours for heavy duty service operation and maximum chemical resistance (at 75 degrees F). Colder temperatures will slow cure time.

### C. Sealing

Sealing is not necessary unless required for a specific application or for aesthetics. Consult with project specifications or Key Resin Technical Service. If sealing is performed, follow mixing and application instructions as recommended by Key Resin Technical Service or as outlined in Installation Instructions document for the resin used. Since Key Urecon TG emits carbon dioxide gas during cure, it is best to delay sealer application at least 8 hours to reduce potential formation of pinholes.

## D. Limitations

1. Do not apply in temperatures below 40 degrees F or above 85 degrees F. Working time will be less than 10 minutes above 80 degrees F.
2. Do not apply to sand/cement mortar beds or concrete with compressive strength less than 3000 psi and tensile strength less than 300 psi. Do not apply over any substrate except sound concrete unless approved by Key Resin Technical Service.
3. Edge Terminations: Do not feather-edge, all free edges of Urecon TG will require a keyed edge to distribute mechanical and thermal stresses. A keyed edge is best achieved by forming or cutting grooves in the concrete. Grooves should have a depth and width of at least 2 times the thickness of the Urecon TG mortar.
4. Joints/Cracks: All joints should ideally be honored in the Urecon TG flooring system and filled with the appropriate joint filler. If joints must be buried at owner's request, route and fill with Urecon SL, Urecon 16 or rigid epoxy, and reinforce with minimum 12" wide fiberglass cloth. Do not use flexible membrane treatment unless approved by Key Resin Technical Service. If membrane is approved, surface of cured membrane must be coated with epoxy and broadcast to excess with sand. Use of flexible membrane is NOT a guarantee to completely prevent future crack propagation through the Key Urecon TG topping. Isolate areas subject to thermal stresses, vibrational movements or around load-bearing columns and at vessel sealing rings. All cracks should be routed out and filled with Urecon TG, Urecon SL, Urecon 16, or rigid epoxy prior to floor application. Epoxy must be sprinkled with sand for proper intercoat adhesion with Key Urecon TG.