

# Specifications for Installation of Self Leveling One Eighth Inch Seamless Epoxy Floor

## Part 1 : Scope

### Product and Application

This specification describes the application of a three part, self leveling seamless epoxy floor applied between 1/16" – 1/8" thick.

#### 1.1 Acceptable Manufacturers

**ICO Floor SL**, as manufactured by International Coatings of Franklin Park, IL or approved equivalent self leveling epoxy resin system.

#### 1.2 Performance Criteria

1. Tensile Strength (ASTM C-307)
  - Minimum : 1920 psi
2. Tensile Elongation (ASTM C-307)
  - Minimum: 12 %
3. Flexural Strength (ASTM C-580)
  - Minimum : 1760 psi
4. Compression Strength (ASTM C-579)
  - Maximum: 6170 psi
5. Hardness Shore D (ASTM D-2240)
  - Maximum: 73
6. Bond Strength to Quarry Tile
  - Minimum: 1000 psi
7. Vapor Transmission Rate (ASTM E-96)
  - Maximum: .03 perms
8. Gardner Impact Strength
  - Minimum: 120 Inch pounds
9. Taber Abrasion C517 wheel, 1000grams 1000 cycles
  - Maximum: 106 mg loss
10. Chemical Resistance: must withstand minimum 7 days immersion on the following chemicals: concentrated citric acid, 20% lactic acid, 30% nitric acid, 85% phosphoric acid, 80% sulfuric acid, 50% sodium hydroxide.

#### 1.3 Materials

1. Component "A" shall be an epoxy resin of the epichlorohydrin bisphenol A type containing special flexibilizers for enhanced thermal shock and impact resistance.
2. Component "B" shall be a blend of amines with non-blushing characteristics.
3. The filler shall be a blend of fine silica sand and silica flour.
4. The maximum ratio of filler: liquid (by volume) shall not exceed 1:1.
5. Liquids shall be 100% solids with no solvents permitted.

## 1.4 Surface Preparation

All new concrete surfaces that will be covered with the systems specified herein should have received a steel trowel, light broom finish and shall be free of all form release agents, curing agents or sealer applications. Concrete shall have cured a minimum of 28 days. If this is not practical, then consult manufacturer for recommended procedures.

### A. General

1. The moisture vapor transmission rate of any slab-on-grade shall be checked using a calcium chloride test kit. The measured vapor transmission rate shall not exceed 5 pounds. Consult manufacturer for further directions.
2. Remove any oil or grease spots with appropriate degreaser, followed by pressure washing.
3. All new concrete should be shot blasted, scarified, or ground to remove any contaminants and to obtain a minimum profile of 40 grit. The prepared surface shall have a neutral pH of 7.
4. All open cracks 1/8" and greater should be v-notched to a 1/2" width by 1/2" depth and cleaned of any debris. Such cracks should be filled with ICO Gel and struck off flush with the surrounding surface.
5. All straight line cracks shall be saw cut to a minimum 3/4" width and 1 1/4" depth centered over the original crack. Remove all dust and debris and fill as specified for expansion joint application.

### B. Protrusions Thru Coating Surfaces

Cut a keyway of at least 1" x 1" around the perimeter of all drains, trenches, steel posts, etc. Remove any rust, sealants or coating from the drain ring, steel posts and pump

### C. Coating System Boundaries

Cut a keyway into the concrete at all termination points, e.g., doorways. The inside edge of the saw cut should be chipped away at a 45° angle to form an undercut for the edge of the application. Do not feather edge.

### D. Expansion Joints

1. Cut back and/or remove any joint backing or filler strips to a minimum of 1 1/2" deep.
2. Insert disposable filler in the joints to prevent filling with the overlayment materials and to allow for accurate location of final saw cuts in the overlayment.

## 1.5 Material Application

### A. Priming

1. Apply **ICO Primer LV or LVFC** with brush or roller at an application rate of about 200-250 SF/gallon, depending on porosity of concrete. Allow to dry

tack free. Re-prime any dry-appearing areas. Use **ICO Primer FC** below 50°F (down to 32°F).

## B. Patching

1. Any deep holes (> ½" deep) should be patched with 100% solids epoxy patching compound, **ICO Patch** and allowed to dry tack free.

## C. Mixing and Application

1. Mix **ICO Floor SL** Parts A and B in the prescribed amounts, for at least 60 seconds, then add the **ICO Fill Self Leveling Sand** for another 30 – 60 seconds until totally uniform, using a low speed, jiffy – style mixer.
2. Dump contents out onto floor and spread with a ¼" notched squeegee for an 1/8" floor or an 1/8" notched squeegee for a 1/16" finished floor.
3. Use a porcupine roller to help air release.
4. Note: Do not apply on sloped floors greater than 1/8" per foot.
5. (Optional) For better gloss and color retention, apply one or two coats of **ICO Ure Guard 60**( same color as **Floor SL**) at about 300-400 SF/gallon/coat.

## D. Expansion Joints

1. Remove disposable joint filler from the expansion joints by saw cutting the overlayment above all expansion joints exposing the full width and length.
2. Insert closed cell joint backing, using a large enough diameter to provide a 30% compression. The joint backing should be forced down in the joint to a depth equal to one half the width.
3. Caulk with **ICO Lastic Gun Grade** and tool the bead to insure full and complete contact with the concrete. Finish bead should be neatly aligned with the saw cut joint edge with no gaps, strings or bubbles.

### 1.6 Protection of Finished Work

1. Prohibit foot traffic on floor for 24 hours after laying (at 70°F). At 50°F, this time should be extended to 48 hours.
2. Rinse off any chemicals that may come in contact with the freshly laid (for first 7 days) floor immediately.

### 1.7 Cleanup

- A. Dispose of all unused and waste materials.
- B. Tools can be washed in warm, soapy water when wet, but after drying, can only be cleaned by grinding or with a paint stripper.
- C. Unused resin can be set off with proper amount of hardener and disposed of in regular trash bins.

### 1.8 Warranty

Installer shall provide a one year warranty against delamination, chemical attack and normal wear and tear.

