

Specifications for Quarter Inch Seamless Epoxy Floor Food & Beverage Plants – 32-40F

Part 1 : Scope

Product and Application

This specification describes the application of a three-part, **one quarter inch** seamless epoxy floor, complete with coves, by the trowelled method.

1.1 Acceptable Manufacturers

ICO Guard Cold Cure, as manufactured by International Coatings of Franklin Park, IL or approved equivalent epoxy resin flooring system.

1.2 Performance Criteria

1. Compressive Strength (ASTM C-579)
 - Maximum : 6000 psi
2. Tensile Strength, filled (ASTM C-307)
 - Minimum: 2000 psi
3. Tensile Elongation, unfilled (ASTM D-638)
 - Minimum: 9%
4. Tensile Elongation, filled (ASTM C-307)
 - Minimum: 3%
5. Hardness, Shore D (ASTM D-2240)
 - Maximum: 75
6. Bond Strength to Quarry Tile
 - Exceeds 1000 psi (quarry tile fails)
7. Vapor Transmission Rate, unsealed (ASTM E-96)
 - Maximum: .03 perms
8. Gardner Impact (ASTM D-2794)
 - Must exceed 160 inch pounds
9. Water Absorption (ASTM D-570)
 - Maximum: 0.3% in 24 hours

1.3 Materials

1. Component "A" shall be an epoxy resin of the epichlorohydrin bisphenol A type containing special flexibilizers for enhanced thermal shock resistance.
2. Component "B" shall be a blend of cycloaliphatic amines with non- blushing characteristics.
3. The filler shall be a blend of 4 types of quartz, including fines, medium and angular, for optimizing filling of pores. The **maximum** fill ratio of aggregate: liquid is **4:1** by weight or **2.5:1** by volume.
4. Material shall be a resin-rich mixture not requiring any sealer or top coat.
5. Material shall be a 100% solids, solvent-free material with no detectable odor.

1.4 Applicator Requirements

1. Applicator shall be certified by material manufacturer to apply product and have a minimum of five year's experience in applying similar systems.

1.5 Surface Preparation

1. 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 10 pounds. Consult manufacturer for further directions.
2. Remove any oil or grease spots with appropriate degreaser, followed by pressure washing.
3. Mechanically prep floor by shotblasting to obtain a minimum profile of 40 grit.
4. All open cracks(1/8" or greater) and control joints should be routed out to a depth of at least 1/2", cleaned of debris and filled flush with ICO Gel.

2. Coating System Boundaries

Cut a keyway into the concrete at all termination points, e.g., doorways, as well as around metal drains and trenches.. The inside edge of the saw cut should be chipped away at a 45° angle and at least 1/2" deep to form an undercut for the edge of the application. Do not feather edge.

3. Expansion Joints

1. Treat like open cracks(see #1.4. above). Note: such joints might show hairline cracks, at which point they can be sawcut and filled with flexible joint filler, ICO Lastic.

1.6 Material Application

1. Trowelled System

- a. Mix **ICO Guard Cold Cure Parts A and B** in the specified prescribed amounts, using the proper measuring buckets, for 30-60 seconds followed by adding **ICO Fill** blended aggregate and dry tint for another 30-60 seconds, using a low speed paddle mixer.
- B. Dump contents out onto floor and screed out with screed rake, screed box or other measuring device to a minimum 1/4" thickness.
- C. Power trowel or hand trowel to level surface, followed by back rolling with an isopropyl alcohol-moistened fine nap roller to close the surface.
- d. Broadcast in brown aluminum oxide grit # 30-36 @ 1/8# -1/4#/SF, then backroll into flooring to obtain more uniform texture.

2. Coving

A 45° cant cove, 2" x 2" can be formed at the intersection of all floor and rising vertical surfaces. Add ICO Thickener to Guard Cold Cure mix to prevent sagging.

1.7 Protection of Finished Work

1. Prohibit foot traffic on floor for 24 hours after laying (assuming 35F temperature).
2. Rinse off any chemicals that may come in contact with the freshly laid (for first 7 days) floor immediately.

1.8 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.

1.9 Warranty

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