

# RESINYTE “CQ” SYSTEM COLORED QUARTZ EPOXY FLOOR COATING



## **PART I – GENERAL**

### **1.01 Scope**

- A. Provide all labor, materials and equipment necessary to apply the Resinyte “CQ” Epoxy Flooring System over designated horizontal concrete surfaces that meet the requirements for the specific intended use.
- B. This specification requires the proper installation of the Pli-Dek, Resinyte “CQ” Epoxy Flooring System as referenced by the manufacturer’s document CQ-120.

### **1.02 Related Sections**

- A. Concrete 03300
- B. Finishes 09000

### **1.03 Description**

- A. The Resinyte “CQ” Epoxy Flooring System is a 100% solids resinous floor coating designed to provide a durable and decorative finished surface comprised of colored quartz granules embedded in a clear epoxy matrix.
- B. Integral sanitary coved base may be incorporated into the floor system, upon request. Contact Pli-Dek Systems, Inc. for details.

### **1.04 Submittals**

- A. Samples:
  1. The applicator shall make and submit a sample of the proposed system to the architect and/or owner for approval.
- B. Manufacturer Information:
  1. Product Data: Furnish Pli-Dek Systems, Inc., manufacturer specifications, installation instructions, system data sheets, product information sheets, maintenance requirements, and general recommendations as it pertains to the installation of the Resinyte “CQ” Epoxy Flooring System.

### **1.05 Quality Assurance**

- A. Applicator must obtain all primary materials necessary for the resinous flooring from Pli-Dek Systems, Inc. including primers, resins, hardening agents, aggregates, finish and sealing coats.
  1. Related secondary materials to be used in conjunction with the resinous flooring must be approved by Pli-Dek Systems, Inc.
- B. The applicator shall be listed with Pli-Dek Systems, Inc. as a trained applicator of the Resinyte Flooring Systems.
- C. It is recommended that the applicator arrange a pre-installation meeting with the general contractor prior to the start of work.
- D. The owner/general contractor may request a third party to perform field testing to assess current moisture vapor transmission rating.

### **1.06 Delivery, Storage, and Handling**

- A. All materials shall be delivered to the job site in the original, un-opened packages with labels intact. Upon arrival, materials shall be inspected for physical damage or freezing. Questionable materials shall not be used.
- B. Storage accommodations shall ensure that the materials are not below 15.5°C (60°F) nor exceed 29.4°C (85°F). All materials shall be stored in a dry location, out of direct sunlight and protected from weather and other damage in accordance with material safety data sheets.
- C. Shelf life of the Pli-Dek Systems, Inc., Resinyte Epoxy Flooring System should not be used after one year from date of manufacturing.

### **1.07 Job Conditions**

- A. Existing conditions:
  1. The applicator shall have access to electrical power, clean potable water and clean work area at the location where the Resinyte “CQ” Epoxy Flooring System is to be applied.
  2. The Resinyte “CQ” Epoxy Flooring System is designed for interior concrete use only. If the system is exposed to ultraviolet rays yellowing will occur, consult Pli-Dek Systems, Inc. for specific recommendations and precautions.
- B. Environmental Conditions:
  1. The ambient air temperature should be no less than 7.2°C (45°F) and not exceed 37.7°C (100°F). Additionally, the relative humidity should not exceed 85%rh. The substrate temperature should not be below 12.7°C (55°F) and should not exceed 32.2°C (90°F). These conditions should remain so for at least 24 hours.
- C. Protection:
  1. Adjacent areas and materials shall be protected from damage, drops and spills.
  2. The Resinyte “CQ” Epoxy Flooring system shall be protected from damage, prior to, during, and immediately after application. Care must be taken to prevent condensation, moisture, and/or heat buildup.
- D. Sequencing and Scheduling:
  1. Application shall be coordinated with other construction trades
  2. Sufficient labor and equipment shall be employed to ensure a continuous operation.

### **1.08 Warranty**

- A. The Resinyte “CQ” Epoxy Flooring System shall be warranted to be free from material defects. Contact Pli-Dek Systems, Inc. for details.



## 1.09 Design Responsibility

- A. The designer selected by the purchaser shall be responsible for all decisions pertaining to design, detail structural capability, attachment details, shop drawings, placement/details of expansion joints, etc. Pli-Dek Systems, Inc. has prepared guidelines in the form of specifications, application instructions, and product sheets to facilitate the design process only. Pli-Dek Systems, Inc. is not liable for any errors or omissions in design or for any changes, which purchasers, specifiers, designers, or their appointed representatives may make to Pli-Dek System, Inc.'s published comments.

## 1.10 Maintenance

- A. Contact Pli-Dek Systems, Inc. for maintenance and warranty requirements.

## PART II. PRODUCTS

### 2.01 Materials

- A. Products
  1. RS-Vapor Prime -Contact Pli-Dek Systems, Inc. for details, guidelines, and when the MVT exceeds 10 lbs.
  2. RS-Membrane – required only in areas that specifically require a “waterproof” surface. Contact Pli-Dek Systems, Inc. for specific details.
  3. RS-Epoxy 100/150 – Pigmented and or Clear.
  4. RS-Colored Quartz
  5. Skid resistant additive – Optional
  6. RS-Urethane 100/150 – Optional
- B. Performance Requirements:
  1. Compressive Strength (ASTM D579) 11,000 psi
  2. Abrasion Resistance (ASTM D4060) .09 gr
  3. Impact Load (MIL D3134) .011”
  4. Applied Load (MIL D3131) .005”
  5. Adhesion (ASTM D4541) >400 psi
  6. Flexural Strength (ASTM C580) 4,000 psi
  7. Flammability (ASTM D635) Self-Extinguishing
  8. Water Absorption (MIL D3134) .03%
  9. Tensile Strength (ASTM C307) 1,640 psi
  10. Microbial Resistance (ASTM G21) Rating 1
  11. Surface Hardness (ASTM D2240 SHORE D) 80-85

## PART III. EXECUTION

### 3.01 Inspection

- A. Substrate:
  1. Concrete areas shall be sloped for positive drainage, as per the code, minimum of 3.2 mm/.3m (1/8” to 1/4” per linear foot) where drainage is required. FHA and ADA guidelines need to be honored in all designated areas.
  2. All concrete substrates not poured over an effective vapor barrier are subject to possible moisture vapor transmissions and related high levels of alkalinity that may lead to adverse effects of the coating. It is the general contractors/owners responsibility to ensure proper vapor barriers are in place.
    - a. Recommended Field Verification Testing by Applicator: (**Refer to Technical Bulletin TB-111 Concrete Moisture & Vapor Drive Testing**):
      1. TARMEX Moisture Content Verification
      2. Plastic Sheet Test
      3. If Moisture Content exceeds 5% or presence of moisture, contact Pli-Dek Inc. for recommendations.
    - b. Moisture & Vapor Transmission per ASTM Testing by Owner (**Refer to Technical Bulletin TB-111 Concrete Moisture & Vapor Drive Testing**):
      1. TARMEX Moisture Content Test per ASTM F2170
        - a. Confirm moisture content <5%
      2. Plastic Sheet Test per ASTM D4263 (visual inspection)
        - a. Confirm the absence of moisture.
      3. If Moisture Content exceeds 5% or presence of moisture, perform Calcium Chloride per ASTM F1869 and report results to Pli-Dek Inc. for recommendations.
    - c. **If owner has not performed the test detailed above, document and provide notice to the owner of absence.**
  3. The concrete surface must incorporate properly placed and designed (by others) control/expansions as to control movement and or shrinkage/drying cracks.

### 3.02 Substrate Preparation

- A. Refer to Resinyte “CQ” Epoxy Flooring System CQ-120 for specific application guidelines and complete instructions.
- B. Concrete shall be structurally sound and have cured a minimum of 28 days prior to application of the Pli-Dek material. All placements of expansion/control joints shall be determined by the structural engineer or concrete contractor to allow for movement. All spalled, severely cracked, and decomposing concrete shall be removed and replaced.
- C. All concrete surfaces must be cleaned to remove all contaminates, grease, oil, dust, paint, sealers, efflorescence, curing compounds etc. that may impair adhesion. The entire surface must be properly profiled by shot blasting or mechanical scarifying.



- D. Perform crack treatment process to locations designated by the general contractor as per Pli-Dek Systems, Inc. Resinyte “CQ” Epoxy Flooring application guideline CQ-120. Pli-Dek Systems, Inc. is not responsible for the integrity of the substrate, thus Pli-Dek Systems, Inc. does not warrant the crack treatment process. Ensure that all expansion and control joints are honored.

### 3.03 Application

- A. General:
1. Refer to the Pli-Dek, Inc. Resinyte “CQ” Epoxy Flooring System application guideline CQ-120 for complete information. Proper ventilation masks should be worn at all times when working with all Pli-Dek Products.
  2. Pli-Dek recommends that substrates meets or exceeds CSP-2 Rating.

### 3.04 Field Quality Control

- A. The applicator shall be responsible for the proper application of the Pli-Dek materials.  
B. Pli-Dek Systems, Inc. assumes no responsibility for application or workmanship.

### 3.05 Skid Resistance and Clean up

- A. In general, the more non-skid additive added to the finished surface the greater the coefficient of friction and corresponding skid resistance thus the more difficult to clean. The smoother the finished surface the easier the surface is to clean but there is a loss of skid resistance properties. It is the general contractor/owners responsibility to approve the appropriate level of skid resistance, safety standards and clean ability based of submitted sampling of the finished product. Pli-Dek Systems, Inc. recommends the use of angular slip-resistant aggregates in all coatings. Pli-Dek Systems, Inc or its sales agents will not be responsible for injury incurred in a slip and fall accident. Please consult local building codes for the current coefficient of friction requirement.

#### Disclaimer

Information contained in this specification conforms to standard detail and product recommendations for the installation of the Pli-Dek products as of the date of publication of this document and is presented in good faith. Pli-Dek Systems, Inc. assumes no liability, expressed or implied, as to the architecture, engineering or workmanship of any project. To insure that you are using the latest, most complete information, contact Pli-Dek Systems, Inc. at:

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\* The Trained Applicator Certificate indicates certain employees of the company have been instructed in the proper application of Pli-Dek products and have received copies of the Pli-Dek Application Instructions and Specifications. The Trained Contractor Program is not an apprenticeship. Each trained contractor is an independent company and bears responsibility for its own workmanship. Pli-Dek Systems Inc. assumes no liability for the workmanship of a trained contractor.

