

RESINYTE™ “U” SYSTEM ALPHATIC URETHANE EPOXY FLOOR COATING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Epoxy & Urethane Floor Coatings and accessories.

1.2 RELATED SECTIONS

- A. Section 03 30 00 - Concrete.
- B. Section 09 00 00 - Finishes.

1.3 REFERENCES

- A. ASTM E 96 - Water Vapor Transmission.
- B. ASTM D695 – Compressive Strength.
- C. ASTM D4060 – Abrasion Resistance.
- D. MIL D3134 – Impact Load.
- E. MIL D3131 – Applied Load.
- F. ASTM D4541 - Adhesion.
- G. ASTM D635 - Flammability.
- H. MIL D3134 – Water Absorption.
- I. ASTM D638 – Tensile Strength.
- J. ASTM G21 – Microbial Resistance.
- K. ASTM D2240 Shore D – Surface Hardness.

1.4 SYSTEM DESCRIPTION

- A. The Resinyte™ “U” Floor Coating System is a high solids, urethane floor coating designed to provide superior durability for applications that are exposed to ultraviolet rays. The finished system provides a protective surface that complies with the stringent California V.O.C regulations.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Installer's approval by Manufacturer: Submit document stating manufacturer's acceptance of Installer as Certified Applicator for the specified materials.

- D. Warranty: Submit a sample warranty identifying the terms and conditions stated in Warranty article.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5-year experience manufacturing similar products.
- B. Manufacturer Certifications: Manufacturer recognized by the following Model Building Code organizations:
 - 1. ICC-ES
 - 2. Florida Product Approval
 - 3. City of Los Angeles Research Report
- C. Applicator Qualifications: Experienced in applying the same materials and shall be specifically certified in writing by the system manufacturer.
- D. Sample: Provide a sample for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship is approved by Architect.
 - 3. Rework mock-up area as required to produce acceptable work.

1.7 PRE-INSTALLATION MEETINGS

- A. Pre-Installation Conference: Prior to beginning work, convene a conference to review conditions, installation procedures, schedules and coordination with other work.
- B. Convene minimum two weeks prior to starting work of this section.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to project site in original, factory-sealed, unopened containers bearing manufacturer's name and label intact and legible with following information.
 - 1. Name of material.
 - 2. Manufacturer's stock number and date of manufacture.
 - 3. Material safety data sheet.
- 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: Resinyte™ Epoxy Flooring Systems should not be used after one year from date of manufacturing.
- D. Handling: Handle materials to avoid damage.

1.9 PROJECT CONDITIONS

- A. Existing Conditions:
 - 1. The builder must give assurance that concrete has been installed according to the International Building Code (IBC) standards and requirements as well as the Resinyte™ "U" System Application Instructions, U-120, before application of the Resinyte™ "U" System. The Pli-Dek technicians/applicators, and/or Pli-Dek Systems, Inc. will not be responsible for any deficiencies in the existing concrete substrate.
 - 2. The applicator shall have access to electrical power, clean potable water and clean work area at the location where the waterproofing materials are to be applied.

3. Other working trades need to be made aware to keep off those areas being covered by waterproofing materials during the application and curing process.
4. All required inspections must be made prior to the installations of the Pli-Dek materials.

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. Protect adjacent areas and materials shall be protected from damage, drops and spills. Protect plants, vegetation and animals which might be affected by waterproofing operations.
2. The Pli-Dek materials shall be protected by permanent or temporary means from weather and other damage, prior to, during, and immediately after application. Care must be taken to prevent condensation and/or heat buildup when using a tarp or plastic as protection.

- D. Maintain work area in a neat and orderly condition, removing empty containers, rags, and rubbish daily from the site.

1.10 SEQUENCING

- A. Application shall be coordinated with other construction trades.
- B. Sufficient labor and equipment shall be employed to ensure a continuous operation.

1.11 WARRANTY

- A. Warranty: Provide manufacturer's standard limited material warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Pli-Dek Systems, Inc., which is located at: 41610 Date Street, Suite 104, Murrieta, CA 92562; Toll Free Tel: 800-364-0287 Tel: 951-834-9550; Fax: 951-834-9551; Email: [request_info \(info@plidek.com\)](mailto:request_info@plidek.com); Web: www.plidek.com
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 EPOXY & URETHANE FLOOR COATING MEMBRANE

- A. Epoxy & Urethane Floor Coating shall be Resinyte™ “U” System comprised of the following components:
 1. PD Vapor Prime: specially formulated 100% Solids epoxy coating designed for use over concrete with high moisture levels for the purpose of isolating the concrete from moisture sensitive flooring.
 2. RS-Membrane: Resinyte™ Membrane is a 100% solids, specially modified flexible epoxy material, that is designed to be applied under various floor and wall surfaces as a waterproofing, fluid proofing and crack isolation membrane.
 3. Resinyte™ Epoxy 100/150: is a two component, skid resistant epoxy coating for use

- over concrete substrates, stairs, ramps, etc.
4. Colored Quartz: decorative blend of colored quartz.
 5. Urethane 100/150: two component, high solids aliphatic polyurethane that produces protective films which are hard, flexible and very impact resistant (optional).

2.3 ACCESSORY PRODUCTS

- A. Skid Resistant Additives: Optional.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Before any waterproofing work is started, the Pli-Dek certified applicator shall thoroughly examine all surfaces for any deficiencies. Where deficiencies exist, the Architect, Owner, or Contractor shall be notified in writing and corrections made.
- B. **Condition of Concrete Surfaces:**
 1. 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.
 2. 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 recommended. FHA and ADA guidelines need to be honored in all designated areas.
 3. 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/owner's responsibility to ensure proper vapor barriers are in place.
 - a. Refer to Technical Bulletin TB-111 Concrete Moisture Vapor Drive Testing for Recommended Field Verification Testing by the applicator and owner.
 4. The concrete surface must incorporate properly placed and designed (by others) control/expansions as to control movement and or shrinkage/drying cracks.

3.2 SURFACE PREPARATION

- A. Refer to Resinyte™ "U" Epoxy Flooring System AC-120 for specific application guidelines for complete instructions.
- B. 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.
- C. Perform crack treatment process to locations designated by the general contractor as per Pli-Dek, Inc. Resinyte™ "U" Epoxy Flooring application guideline U-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.

3.3 APPLICATION

- A. **Primer Coat:**
 1. If necessary based on job site conditions and/or moisture vapor transmission, prime the surface with PD-Vapor Prime with a 3/32" notched squeegee and back roll with a 3/8" non-shedding nap roller. Application rate is approximately 225 sq. ft. per gallon depending on substrate porosity. Allow to cure to for a minimum of 12 hours

prior to application of subsequent applications. Do not exceed 24 hours between coats.

B. Urethane 150:

1. After mixing the Urethane 150, immediately apply the Urethane 150 at a rate of approximately 275-375 sq. ft. per gallon using a notched squeegee and back rolling with a 3/8" non-shedding nap roller. Perimeter to be cut in prior with paintbrush. *A notched trowel or squeegee will help regulate the thickness and a porcupine roller will help to release trapped air and minimize bubbles.
2. Proceed with a second coat of Urethane 150 as described above.

3.4 CLEAN UP

- A. The applicator in accordance with contract provisions shall remove all excess Resinyte™ "U" System materials from the job site.
- B. All surrounding areas, where the waterproofing materials have been applied, shall be left free of debris and foreign substances resulting from the contractor's work.

3.5 SLIP AND FALL PRECAUTION:

- A. OSHA, American Disabilities Act (ADA), and The Federal Housing Act (FHA) have now set enforceable standards for slip-resistance on pedestrian surfaces. Pli-Dek Systems, Inc. recommends the use of angular slip-resistant aggregate in all coatings or flooring systems that may be exposed to wet, oily/greasy, or otherwise potentially slippery conditions. It is the end user's responsibility to provide a flooring system that meets current safety standards. 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.

END OF SECTION

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. Pli-Dek Systems, Inc. or the Pli-Dek Applicator does not warrant cracks in the Pli-Dek Finish material resulting from structural movement and/or recurring of existing cracks in the substrate. To ensure that you are using the latest, most complete information, contact Pli-Dek Systems, Inc., at:

**41610 Date St, Suite 104
Murrieta, CA 92562
Tel.: (800) 364-0287
Website: www.plidek.com**