



# RESINYTE™ "U" SYSTEM

## Aliphatic Urethane Flooring System

### **PART I – GENERAL**

#### **1.01 Scope**

- A. Provide all labor, materials and equipment necessary to apply the Resinyte "U" Aliphatic Urethane 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 "U" Aliphatic Urethane Flooring System as referenced by the manufacturer's document RS-U-184.

#### **1.02 Related Sections**

- A. Concrete 03300
- B. Finishes 09000

#### **1.03 Description**

- A. The Resinyte "U" Aliphatic Urethane Flooring System, is a low VOC (SCAQMD compliant) blended polyester aliphatic urethane system designed to provide superior chemical resistance, durability, and ultraviolet light stability.
- B. Integral sanitary covered 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, application instructions, system data sheets, product information sheets, maintenance requirements, and general recommendations as it pertains to the installation of the Resinyte "U" Aliphatic Urethane Flooring System.

#### **1.05 Quality Assurance**

1. 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.
  - a. Related secondary materials to be used in conjunction with the resinous flooring must be approved by Pli-Dek Systems, Inc.
2. The applicator shall be listed with Pli-Dek Systems, Inc. as a trained\* applicator of the Resinyte Flooring Systems.
3. It is recommended that the applicator shall arrange a pre-installation meeting with the general contractor prior to the start of work.
4. 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 60°F nor exceed 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 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 "U" Aliphatic Urethane Flooring System is to be applied.
- B. Environmental Conditions:

1. The ambient air temperature should be no less than 45°F and not exceed 100°F. Additionally, the relative humidity should not exceed 85%rh. The substrate temperature should not be below 55°F and should not exceed 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 "U" Aliphatic Urethane 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 build up.
- 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 "U" Aliphatic Urethane 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 Systems, 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-Urethane 100/150 – Clear or pigmented
  4. Skid resistant additive – Optional
- B. Performance Requirements:
- |   |                |
|---|----------------|
| 1. Gloss (60degrees)                              | 90-95          |
| 2. Gloss (satin material, 60 degrees)             | 50-60          |
| 3. Hardness (Konig)                               | 122            |
| 4. Tabor Abrasion                                 | 30 mg/loss     |
| 5. Impact Resistance Direct/ Reverse (ASTM D2794) | 160 in/lbs     |
| 6. Flexibility (ASTM D222)                        | Passes 1/8"    |
| Chemical Resistance (ASTM D1308)                  |                |
| Isopropyl Alcohol                                 | No Effect      |
| Sodium Hydroxide 50%                              | No Effect      |
| Skydrol   | No Effect      |
| Hydrocholic Fluid #83282                          | No Effect      |
| Gasoline  | No Effect      |
| Mineral Spirits                                   | No Effect      |
| Xylene  | No Effect      |
| MEK   | Film Softened  |
| Sulphuric Acid 25%                                | No Effect      |
| Acetic Acid 25%                                   | No Effect      |
| Nitric Acid 25%                                   | Film Blistered |

\*Contact Pli-Dek for additional chemical resistance.

## **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. If conditions and or level of vapor transmission are unknown, Pli-Dek Systems, Inc. recommends that the owner/general contractor hire a third party to conduct moisture testing in accordance with ASTM F 18907 or ASTM E1907. If the moisture vapor emission rating exceeds 3 pounds per 1,000 sq. ft per 24 hour period or the relative humidity exceeds 75% consult Pli-Dek Systems, Inc. with the specific results for written recommendations prior to application of the Resinyte Epoxy Flooring System. If MVT levels are greater than 3 lbs. and less than 10 lbs. per 1,000 sq. ft. in a 24 hour period the RS-Vapor Prime will be required.
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**

1. Refer to Resinyte "U" Aliphatic Urethane Flooring System RS-U-184 for specific application guidelines and complete instructions.
2. 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.
3. 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.
4. Perform crack treatment process to locations designated by the general contractor as per Pli-Dek Systems, Inc. Resinyte "U" Aliphatic Urethane Flooring application guideline RS-U-184. 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 Systems, Inc. Resinyte "U" Aliphatic Urethane Flooring System application guideline RS-U-184 for complete information. Proper ventilation masks should be worn at all times when working with all Pli-Dek Products.

### **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.

### **3.06 Skid Resistance and Cleanability**

- 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 cleanability 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.