

## **SECTION 09705 RESINOUS FLOORING**

### **Nikka Corporation Thin Mil Flooring System**

#### **PART 1 – GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Provide labor and all necessary materials for an epoxy/urethane floor coating system designed for traffic, chemical resistance, aesthetic appeal, and abrasion resistance – including all necessary surface preparation, primer(s), topcoat(s), and aggregates.

##### **1.02 RELATED SECTIONS**

- A. Division 3 (Concrete)
- B. Division 7 (Thermal and Moisture Protection)

##### **1.03 DELIVERY, STORAGE AND HANDLING**

- A. Ensure delivery of materials to job site in unopened, clean containers that are clearly marked with manufacturer's name, phone number, HMIS, appropriate lot/batch numbers, product name, and color.
- B. Store materials in a safe, dry, enclosed environment away from sunlight, excessive heat, and other hazards at a temperature between 60 and 90 degrees Fahrenheit.

##### **1.04 JOB SITE CONDITIONS**

- A. New concrete must be cured for at least 30 days prior to applying epoxy flooring system.
- B. Maintain surface and ambient temperature according to manufacturer's recommendations. Surface temperature must be at least 5 degrees Fahrenheit above dew point.
- C. Concrete must be free of hydrostatic, capillary, or moisture pressure. Substrates in contact with the ground must have a properly installed, functioning, and effective moisture vapor barrier to help prevent potential problems resulting from hydrostatic, capillary or moisture vapor pressure. Concrete must contain less than 3.0 pounds per 1,000 square feet per 24 hours when tested per ASTM F-1869.
- D. Concrete should have been designed and installed as approved by architect/engineer to minimize random cracking, curling, and slab deflections and shall contain well-designed control and isolation joints as approved by architect/engineer.
- E. Do not apply sealers or membrane curing agents to concrete. Moisture curing is recommended. If said agents have been placed, they are to be removed prior to application of any part of this system.
- F. Surfaces are to be kept free of traffic and no trades shall be permitted in areas during the preparation of the floor surface, the application of the coating system, or the curing cycle of the coating system.

##### **1.05 WARRANTY**

- A. Submit a one-year warranty against defects in material and workmanship upon completion of installation.

## **PART 2 – PRODUCTS**

### **2.01 PRODUCT DESCRIPTION**

- A. Thin-film seamless flooring system, consisting of:
1. Primer selected according to project requirements from: Water based (NC-WBEC) or Solvent-Based Epoxy Coating (NC-SBEC), or High-Build Epoxy Primer (HBEP)
  2. Topcoat of Hi-Performance Urethane (NC-HPU) (high-wear and slip-resistant aggregates are optional)
  3. Optional 2<sup>nd</sup> topcoat of Hi-Performance Urethane (NC-HPU)

### **2.02 TYPICAL PHYSICAL PROPERTIES**

| <b><u>Property</u></b>  | <b><u>Test Method</u></b> | <b><u>Result</u></b>        |
|---|---------------------------|-----------------------------|
| Hardness (Shore D)  | ASTM D-2240               | 72                          |
| Adhesion  | ASTM D-4541               | 360 psi – substrate failure |
| Impact Resistance   | ASTM 2794                 | 160 in. lb. – pass          |
| Abrasion Resistance<br>CS-17 Wheel – 1000 gram load, 500 cycles | ASTM D-1044               | 20 mg loss                  |

\*test data based on neat resin

## **PART 3 – EXECUTION**

### **3.01 SURFACE PREPARATION**

- A. Prepare surface in accordance with manufacturer's instructions. Project requires a CSP-1, 2, 3, 4, or 5, depending upon mil thickness of total flooring system. Refer to ICRI guideline No. 03732 for anchor profile requirements.
- B. Assure removal of concrete laitance by Diamond Grinding or other method approved by manufacturer.
- C. Surface must be clean, dry, and sound prior to application. Alkalinity of concrete should be less than 12.5 pH.
- D. Pre-fill surface irregularities, holes, and cracks in accordance with manufacturer's recommendations.

### **3.02 PRODUCT MIXING**

- A. Comply with manufacturer's instructions for mixing procedures.
- B. Pre-mix each component before every batch to ensure uniformity, especially if not using all of the material in a package.
- C. Carefully measure components and mix thoroughly and properly.

**3.03 INSTALLATION**

- A. Apply appropriate primer (refer to Section 2.01A) according to manufacturer's instructions – paying special attention to coverage rate/mil thickness, and allow to cure.
- B. Install topcoat of Hi-Performance Urethane according to manufacturer's instructions – paying special attention to coverage rate/mil thickness, and allow to cure. (Pre-mix aggregate if using for added wear or slip resistance)
- C. (OPTIONAL) Install 2<sup>nd</sup> topcoat of Hi-Performance Urethane according to manufacturer's instructions – paying special attention to coverage rate/mil thickness, and allow to cure. (Pre-mix aggregate if using for added wear or slip resistance)

**3.04 PROTECTION**

- A. Keep other trades and all traffic away from flooring until coating system has fully cured.
- B. Based on standard environmental conditions of 70 degrees F and 50% humidity, the flooring should achieve full cure in 3 – 5 days.

**END OF SECTION**