

## **SECTION 09624 - SYNTHETIC ATHLETIC FLOORING**

### **PART 1 - GENERAL**

#### **1.1 DESCRIPTION**

- A. Scope
  - 1. The complete installation of synthetic sports surfacing system including striping.
- B. Related work specified under other sections.
  - 1. CONCRETE MOISTURE VAPOR EMISSION AND pH TESTING - SECTION 01450
    - a. Moisture vapor emission and pH of concrete shall be tested. Moisture vapor emissions must not exceed 3 lbs/1,000 ft<sup>2</sup> per 24 hours as verified using Calcium Chloride test ASTM F 1869-04. pH level should be in the range of 7 to 8.5.
  - 2. CONCRETE SUBFLOORS - SECTION 03\_\_ \_\_
    - a. The general contractor shall furnish and install the concrete subfloors, depressing the slab sufficiently to accommodate the floor system.
    - b. The slab shall be steel troweled and finished smooth to a tolerance of 1/8" in any 10' radius. Floor flatness and floor levelness (FF and FL) numbers are not recognized. High spots shall be ground level and low spots filled with approved leveling compound.
    - c. **No concrete curing, hardening or sealing agents shall be applied or mixed with the concrete subfloor.**
  - 3. MEMBRANE WATERPROOFING - SECTION 07\_\_ \_\_
    - a. Concrete subfloors on or below grade shall be installed over a suitable moisture retardant membrane. Water vapor membrane shall comply with ASTM E 1745-97 (2004).
  - 4. GAME STANDARD INSERTS - SECTION 11\_\_ \_\_

#### **1.2 REFERENCES**

- A. ASTM (American Society for Testing & Materials)
  - 1. ASTM D 2240-04
  - 2. ASTM E 1745-97 (2004)
  - 3. ASTM F 1869-04

#### **1.3 SUBMITTALS**

- A. Connor® ElastiPlus™ specifications.
- B. One sample of the specified system, if requested by Architect.
- C. Connor Synthetic Care & Maintenance Guide.
- D. Current installation instructions as published by Connor.

#### **1.4 QUALITY ASSURANCE**

- A. MATERIAL SUPPLIER: Shall be Connor.
- B. INSTALLER:
  - 1. The complete installation of the flooring system, as described in these specifications, shall be carried out by an experienced installer (Flooring Contractor), and the work shall be performed in accordance with current Connor installation instructions.
  - 2. Installer (Flooring Contractor) shall be liable for all matters related to the installation for a period of one year after the floor has been installed and completed.

#### **1.5 DELIVERY, STORAGE AND HANDLING**

- A. Materials must be delivered in Connor's original, unopened and undamaged packaging with identification labels intact.
- B. Store the material protected from exposure to harmful weather conditions on a clean, dry, flat surface protected from possible damage. **Do not stack rolls of material.**
- C. Storage conditions shall be 60°F to 85°F.

#### **1.6 SITE CONDITIONS**

- A. Installation of synthetic materials shall not commence until all other finishes and overhead mechanical trades have completed their work in the synthetic floor areas.
- B. Permanent heat, light and ventilation shall be installed and operating during and after installation. Subfloors shall be clean, dry, and free from dirt, dust, oil, grease, paint, old adhesive residue, or other foreign materials.
- C. Moderate room temperature of 65° F to 80° F shall be maintained for one week prior to, during and 72 hours after installation.
- D. Flooring installation shall not begin until moisture vapor emissions, pH level, and levelness of concrete subfloors have been met. The installation area shall be closed to all traffic and activity for a period to be set by the flooring contractor.
- E. Environmental Limitations
  - 1. Comply with requirements of Connor.
  - 2. Adhere to all MSDS requirements for materials employed in the work. Protect all persons from exposure to hazardous materials at all times.
- F. After the synthetic floors are installed and the game lines are painted, the area is to be closed to allow curing time for the system. No other trades or personnel are allowed on the floor until the owner has accepted it.

## 1.7 WARRANTY

- A. Connor provides a limited warranty of three (3) years on the materials it has supplied. (A copy of the full warranty, with its Terms and Exclusions, is available from the authorized Connor Dealer.) This warranty is expressly limited to the flooring materials (goods) supplied by Connor. This warranty does not cover floor damage caused (wholly or in part) by fire, winds, floods, moisture, other unfavorable atmospheric conditions or chemical action, nor does it apply to damage caused by ordinary wear, misuse, abuse, negligent or intentional misconduct, aging, faulty building construction, concrete slab separation, faulty or unsuitable subsurface or site preparation, settlement of the building walls or faulty or unprofessional installation of Connor flooring systems.
- B. Connor shall not be liable for incidental or consequential losses, damages or expenses directly or indirectly arising from the sale, handling or use of the materials (goods) or from any other cause relating thereto, and their liability hereunder in any case is expressly limited to the replacement of materials (goods) not complying with this agreement or, at their election, to the repayment of, or crediting buyer with, an amount equal to the purchase price of such materials (goods), whether such claims are for breach of warranty or negligence. Any claim shall be deemed waived by buyer unless submitted to Connor in writing within 30 days from the date buyer discovered, or should have discovered, any claimed breach.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS (Connor ElastiPlus™)**

- A. All polyurethane components shall be non-hazardous, and shall not contain ANY lead, mercury, heavy metals, PCB, or formaldehyde, and shall be supplied by Connor.
- B. ElastiPlus™ Basemat Adhesive – Two-component polyurethane.
- C. ElastiPlus™ Basemat – Specially formulated prefabricated resilient basemat made of recycled rubber and foam granules bound with MDI polyurethane. Basemat is a constant thickness.
  - 1. Basemat density – 42lbs/ft<sup>3</sup>
  - 2. Basemat standard thickness – 6mm
    - a. Optional thicknesses  
4mm, 7mm, 9mm
- D. ElastiPlus™ Scratch Coat (mat sealer) – Two-component, thixotropic polyurethane compound.
- E. ElastiPlus™ Wear Coat – Two-component, pigmented, seamless self-leveling polyurethane.
  - 1. Total wear layer thickness – 2mm throughout the floor.
  - 2. Physical Properties – Surface Hardness; Shore A 80 minimum per ASTM D-2240.
    - a. Full technical data and specifications upon request.

- F. ElastiPlus™ Top Coat (matte finish) – Three-component water-based urethane Top Coat. Select from standard colors.
- G. ElastiPlus™ Game Line Paint – Three-component water-based urethane. Select from standard colors.
- H. Optional Base (**specify or delete**) – Vinyl wall base 4” high. Select from standard colors.

### **PART 3 - EXECUTION**

#### **3.1 INSPECTION**

- A. Inspect the concrete slab for proper flatness and levelness. Report any discrepancies to the general contractor.
- B. Concrete slab shall be broom cleaned by the general contractor.
- C. Installer (Flooring Contractor) shall document all working conditions as specified in PART 1 – GENERAL prior to starting the installation. Report any discrepancies to the general contractor.

#### **3.2 EXAMINATION AND PREPARATION**

- A. Review moisture vapor emission and pH test results as supplied by SECTION 01450.
  - 1. Moisture vapor emissions must not exceed 3 lbs/1,000 ft<sup>2</sup> per 24 hours (as verified using Calcium Chloride test ASTM F 1869-04).
  - 2. pH level should be in the range of 7 to 8.5.
- B. Installation shall not be carried out unless the concrete flatness, moisture vapor emissions, and pH requirements as specified are satisfied.

#### **3.3 INSTALLATION**

- A. Prepare the concrete to receive the flooring material in accordance with installation instructions.
- B. Basemat
  - 1. Unroll the base mat and allow it to relax overnight or approximately 12 hours. **Do not cut the base mat to final dimensions until it is laid into the adhesive.**
  - 2. Thoroughly mix the two-component polyurethane adhesive per Connor's instructions and apply it directly to the concrete subfloor with a V-notched 3/32" X 3/32" X 3/32" trowel.
  - 3. Install the base mat into the freshly applied adhesive. **Do not allow a compression fit at any seam.** Roll the base mat with a 100 lb segmented roller and repeat the rolling process on the entire mat 45 minutes after installation. Allow the adhesive to cure before proceeding to the next step.
- C. Scratch Coat
  - 1. Thoroughly mix the two-component Scratch Coat per Connor's instructions.
  - 2. Apply two layers of Scratch Coat to the base mat with a flat trowel. Allow each layer to cure a minimum of 8 hours before proceeding to the next application. Inspect for, and fill all gaps by applying additional material as needed. Sand down any ridges in the cured Scratch Coat with 100 grit sand paper.
- D. Wear Coat
  - 1. Thoroughly mix the two-component Wear Coat per Connor's instructions.
  - 2. Apply the mixed wear coat material using a notched squeegee in one layer. The Wear Coat must be applied wet-into-wet to create a seamless surface. Allow the Wear Coat to cure 12 hours before proceeding to the next application. Sand any imperfections in the finished surface with 100 grit sandpaper.
- E. Top Coat
  - 1. Thoroughly mix the three-component water-based urethane Top Coat per Connor's instructions.
    - a. Apply the mixed material with a paint roller at 250 to 300 square feet per gallon. Allow the Top Coat to cure a minimum of 18 hours before applying the game lines.
    - b. *Optional application (Contractor's option) - Apply the mixed material with an airless sprayer at 225 to 250 square feet per gallon. Allow the Top Coat to cure a minimum of 18 hours before applying the game lines.*

- F. Game Lines
  1. Use only high-quality masking tape approved by Connor.
  2. Thoroughly mix the three-component game line paint per Connor's instructions.
  3. Provide game lines as indicated on drawings.
- G. Wall Base (**optional**) - Install vinyl base anchored to the walls with base cement.
- H. Remove all excess and waste materials from the work area. Dispose of empty containers in accordance with federal and local statutes.

**END OF SECTION 09624**