

## **SECTION 096566 --- RESILIENT ATHLETIC FLOORING**

### **PART 1-GENERAL**

#### **1.1 DESCRIPTION**

- A. This document specifies the complete installation of a urethane surface system designed for multiple sport use, as formulated by Horner Flooring Company.
- B. The concrete contractor shall provide a concrete slab, smooth troweled and level to a tolerance of 1/8" (3mm) in a 10'0" (3m) radius, subject to the approval of the flooring contractor. LABOR AND MATERIALS NECESSARY TO PUT THE CONCRETE SLAB IN ACCEPTABLE CONDITION (HIGH AREAS GROUND DOWN AND LOW AREAS FILLED WITH APPROVED LEVELING COMPOUNDS) SHALL BE THE RESPONSIBILITY OF THE CONCRETE CONTRACTOR.
  - 1. Membrane waterproofing
    - a. Concrete subfloors on or below grade shall be adequately waterproofed beneath and at the perimeter walls and on earth side of below grade walls. It is the responsibility of the engineer to determine the extent of this need.
  - 2. Concrete subfloors shall have an adequate vapor retarder beneath and at the perimeter of the slab.
  - 3. No pea gravel, river gravel or slag aggregate shall be allowed in the concrete. The concrete strength range at the time of wood flooring installation shall be between 3,000 PSI and 3,500 PSI.

#### **1.2 QUALITY ASSURANCE**

- A. Supplier Qualifications
  - 1. Supplier of flooring shall be Horner Flooring Company.
  - 2. Basis of design shall be "CushionCourt Series" sports floor system as provided by Horner Flooring, [www.hornerflooring.com](http://www.hornerflooring.com), (800-380-0119).
  - 3. Materials other than those listed must be approved 10 days prior to bid date by written addendum. Materials from non-approved manufacturers will not be accepted.
- B. Installer Qualifications
  - 1. The flooring contractor shall be a Horner Accredited Installation Company on-site for the duration of the wood floor installation; or, a contractor approved by Horner Flooring.
- C. Flooring materials shall never be stored outdoors or exposed to outdoor elements in transport or storage.
- D. CushionCourt GPS 1 and 2 shall meet DIN requirements.

#### **1.3 WORKING CONDITIONS**

- A. The floor system shall not be delivered or installed until the concrete slab is properly cured and all masonry, plastering, tile work and overhead mechanical trades are completed and building is permanently enclosed and weathertight.
- B. Flooring installation shall not begin until all sub-contract work which would cause damage, dirt, dust or interruption of normal installation pace is completed. Subfloors shall be clean, dry and free from dirt, dust, oil, grease, paint, alkali, concrete curing agents, hardening and parting compounds, old adhesive residue, or other foreign materials.
- C. Moisture content of the concrete slab must not exceed 3 pounds per 1,000 square feet (1kg per 68 m<sup>2</sup>) over 24 hours when using the calcium chloride test as per ASTM 1869-98.
- D. The installation area shall be closed to all traffic and activity for a period to be set by the flooring contractor.
- E. Permanent heat, light, and ventilation shall be installed and operating prior to, during and after installation. HVAC System shall be operating in balance at levels and conditions consistent with those during permanent occupancy.
- F. If the material is to be stored prior to installation, the general contractor shall provide an area where the stored materials can be maintained at a minimum of 55° F (13° C) and relative humidity under 50%.
- G. One week prior to, during and for 168 hours after installation, a room temperature of 65° F (18° C) or more and 35% relative humidity or less shall be maintained.
- H. Adhere to all MSDS requirements for materials employed in the work. Protect all persons from exposure to hazardous materials.
- I. After synthetic floors have been fully installed, the floor area is to be kept locked by general contractor for a minimum of 120 hours to allow curing time for system. No other trades or personnel are allowed on floor until accepted by the owner in writing.

**1.4 WARRANTY**

- A. Horner Flooring Company hereby warrants the flooring materials to be free from manufacturing defects for a period of 5 years from the date of substantial completion. This warranty is expressly limited to the flooring materials supplied by Horner. This warranty is in lieu of all other warranties, expressed or implied including but not limited to any warranty of merchantability or fitness for a particular purpose, and of any other obligations on the part of Horner. This warranty does not cover floor damage caused by conditions beyond our control, such as fire, wind, floor surface chemical action, faulty maintenance, improper ventilation, faulty construction of building, Act of God, ordinary wear and tear, excess moisture and excess dryness, separation of concrete slab, settlement of walls, failure of floor if not installed properly, when installed over poured urethane or other previously existing floors if poured urethane returns to its liquid state, if previously existing floors release from concrete slab. In the event of breach of any warranty, the liability of Horner shall be limited to repairing or replacing material and system components supplied by Horner and proven to be defective in manufacture, and shall not include any other damages, either direct or consequential.
- B. Extended warranties are based on maintenance and yearly/annual cleaning and recoating agreements with certified contractors.

**PART 2-PRODUCTS**

**2.1 MATERIAL**

- A. All components shall be non-hazardous and not contain ANY lead, mercury, nor any heavy metals, PCB, or formaldehyde and shall be supplied by Horner Flooring Company.
- B. Horner Basemat Adhesive is a two (2) component polyurethane.
- C. Horner Basemat is a prefabricated rubber mat made of recycled rubber granules and of a constant thickness.
  - 1. Basemat thickness – 7mm  
 OPTION: Thickness may be 4mm, 9mm, 12mm or 14mm
- D. Horner Seal Coat is a two (2) component, thixotropic polyurethane compound.
- E. Horner Structural Coat is a seamless, self-leveling two (2) component polyurethane. Use this for all systems except TopOff.
  - 1. Total wear thickness – 2mm average throughout the floor.  
 OPTION: For basemat thicknesses of 14mm (without mess netting) total wear thickness shall be 3mm average throughout the floor.
  - 2. Physical properties shall be:
 

Shore A Hardness:	80
Tensile Strength DIN 53504:	N/mm <sup>2</sup> 7.0
Elongation at Break DIN 53504:	150%
Shock Absorption:	
min. 51(Cat.1) min. 45 (Cat. 2):	7mm=28%, 9mm=32%, 4mm=14.4%
Rolling Load:	1000 N
Remaining Indentation max. 0.5 mm:	7mm=0.17, 9mm=0.37, 4mm=0.21
Ball Rebound min. 90%:	99.0%(4, 7, and 9)
Sliding Coefficient 0.4-0.6 mm:	7mm=0.50, 9mm=0.44, 4mm=0.43
- F. Horner Top Coat is a pigmented two (2) component, UV, abrasion resistant polyurethane top coating. It can be provided in a variety of standard colors (matte finish). Use this top coat for all systems including reNew™.
- G. Horner Game Line Paint is a two component, high solids, polyurethane, mat line paint. It comes in a variety of standard colors.
- H. OPTION: Vinyl wall base 4" (102mm) high; select color: black or brown.
- I. OPTION: TRACKtion™, an activity specific granulation additive for additional traction which is often required of running tracks and tennis courts if so specified.

- J. OPTION: GPS 1 AND GPS 2 DIN certified systems passing DIN 18032 categories 1 and 2 respectively.
1. GPS 1 use Horner DIN mesh netting in seal layer with standard 2mm average structural coat pour.
  2. GPS 2 use 3mm average pour of structural resin.

## **PART 3-EXECUTION**

### **3.1 INSPECTION**

- A. Inspect concrete slab for proper tolerance and dryness and report any discrepancies to the general contractor for correction.
- B. The concrete slab shall be cleaned of all debris so flooring contractor will have adequate access to work surface.
- C. All overhead work and wet trades shall be complete in floor work area.
- D. Installer shall document all working conditions provided in general specifications before installation begins.

### **3.2 INSTALLATION**

- A. Basemat
  1. Unroll basemat and allow to relax. Do not cut basemat to final dimensions until laid into adhesive.
  2. Thoroughly mix the two-component polyurethane adhesive and apply directly to the concrete subfloor with a notched trowel per manufacturer's instructions.
  3. Install basemat into freshly applied adhesive. Do not allow compression fit at any seams. Roll basemat with an 80 pound (37kg) roller and repeat the rolling process on the entire mat 45 minutes after installation. Allow adhesive to cure before proceeding to seal coat.
- B. Seal Coat
  1. Thoroughly mix two-component seal coat.
  2. Apply two layers of seal coat to basemat 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 applying additional material as needed. Sand down any ridges in cured seal coat with 80 grit sandpaper.
- C. Structural Coat
  1. Thoroughly mix two-component structural coat.
  2. Apply mixed material using a notched squeegee in one layer. The structural coat must be applied wet-into-wet to create a seamless surface. Allow structural coat to cure 12 hours before proceeding to the next application. Manually sand any imperfections in the finished surface.
- D. Top Coat
  1. Thoroughly mix two-component polyurethane top coat.
  2. Apply mixed material with a high-solvent paint roller. Allow top coat to cure a minimum of 12 hours before applying game lines.
- E. Game Lines
  1. Use only high quality masking tape approved by manufacturer.
  2. Thoroughly mix two-component game line paint.
  3. Provide game lines as indicated with specifications and governing bodies.
- F. OPTION: TRACtion™
  1. If so specified, apply according to manufacturer's recommendations.
- G. OPTION: Install vinyl base by anchoring to walls with base cement.
- H. OPTION: reNew™
  1. Install Horner structural coat over previously existing urethane floor after proper preparation of existing conditions.
  2. Install Horner Top Coat and game lines per previously listed methods.
- I. OPTION: TopOff™
  1. Install Horner Top Coat and game lines per previously listed methods. over existing urethane floor after proper preparation of existing conditions.
- J. Remove all excess and waste materials from the area of work. Dispose of empty containers in accordance with federal and local statutes.

**3.3 VINYL WALL BASE - OPTION**

- A. Install Vent Cove Base, mitering inside corners and anchoring to walls with base cement or screws and anchors.

**3.4 PROTECTION**

- A. No traffic or other trades shall be allowed on the surface for a period of one week (168 hours) following installation to allow for complete curing of the finish.
- B. No smoking, open flames, or sparks from electrical equipment or other sources shall be permitted during application of materials

**3.5 MAINTENANCE**

- A. Upon completion of floor installation, the owner, attendants or individuals in charge and responsible for the upkeep of the building are to see that the care and maintenance instructions outlined within the provided Horner Care and Maintenance Manual are followed. Horner Flooring and certified dealers may offer extended warranty and maintenance agreements. It is recommended that any extended agreements include maintenance and recoats by the original installing contractor or related/recommended parties. (See maintenance/cleaning and recoating information on Horner Flooring website).

**END OF SECTION**