

SECTION 321823 - EXTERIOR ATHLETIC SURFACING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Scope
 - 1. The complete installation of modular athletic surfacing system including the interlocking high-impact polypropylene copolymer tile of proprietary formulation and striping.
- B. Related work specified under other sections.
 - 1. CONCRETE SUBFLOORS - SECTION 03 00 00
 - a. The general contractor shall furnish and install the concrete subfloors.
 - b. The slab shall be a medium broom finish with level tolerances of $\pm 1/8"$ (3.2mm) in any 10' (3m) 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. The slab shall have a slope no more than 0.5%, or 1 inch in 16 feet, all in one plane. Optionally, concrete slab may be crowned at the court center line and sloping down at 0.5% towards the edge of the slab.
 - d. Installations over nonconforming concrete, asphalt, acrylic, and other retrofits have additional requirements. See Sport Court® Exterior Subfloor Specification document for additional information.
 - 2. GAME STANDARD INSERTS - SECTION 11 66 00

1.2 REFERENCES

- A. ASTM (American Society for Testing & Materials)
 - 1. ASTM D 256
 - 2. ASTM D 638
 - 3. ASTM D 648
 - 4. ASTM D 785
 - 5. ASTM D 792
 - 6. ASTM F 1015
 - 7. ASTM F 1292
 - 8. ASTM G 21
- B. ISO (International Organization for Standardization)
 - 1. ISO 1183
 - 2. ISO 527-1, -2
 - 3. ISO 179
 - 4. ISO 180
 - 5. ISO 75B-1, -2
 - 6. ISO 9001:2015
 - 7. ISO 14001:2015
- C. EN (European Norm)
 - 1. EN 12235
 - 2. EN 12616
 - 3. EN 13036-4
 - 4. EN 14808
 - 5. EN 14877
 - 6. EN ISO 5470-1

1.3 SUBMITTALS

- A. Sport Court® PowerGame+™ modular athletic surfacing specifications.
- B. One sample of specified system, if requested by Architect.
- C. Sport Court® - Exterior Subfloor Specification
- D. Sport Court® - Outdoor Game Court Maintenance Instructions.
- E. Sport Court® Warranty.

1.4 QUALITY ASSURANCE

A. MATERIAL SUPPLIER:

1. Shall be Sport Court International, Inc. (manufacturer)
2. Manufacturer shall be ISO 9001:2015 and ISO 14001:2015 Certified to assure proper quality and environmental control.
3. Manufacturer shall be a Zero Waste™ company.
4. Manufacturer shall have produced sports surfaces for a longer period then their stated warranty.
5. Surfaces must be certified for competition by the international federations for basketball (FIBA) and volleyball (FIVB).

B. INSTALLER:

1. The complete installation of the surfacing system as described in these specifications shall be carried out by an experienced installer (Contractor), and the work shall be performed in accordance with current Sport Court® installation instructions.
2. Installer (Contractor) shall be liable for all matters related to installation for a period of one year after the floor has been substantially installed and completed.
3. Successful bidder shall submit a minimum of five (5) completed modular projects of similar magnitude and complexity within the last two (2) years.
4. Bidder shall provide all sample tile and documentation.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Materials shall be delivered in manufacturer's original, unopened and undamaged packaging with identification labels intact.
- B. Store material on a clean, dry, and flat surface, protected from exposure to harmful weather conditions or possible damage.

1.6 SITE CONDITIONS

- A. To prevent damage and not void the warranty, installation of modular materials shall not commence until all other finishes and overhead mechanical trades have completed their work in the athletic surfacing areas.
- B. Subfloors shall be clean, dry and free from dirt, dust, oil, grease, paint, or other foreign materials.
- C. Surfacing installation shall not begin until the levelness requirements of concrete subfloors have been met.
- D. Surfacing installation shall not begin until permits are approved.
- E. The installation area shall be closed to all traffic and activity for a period to be set by the Contractor.
- F. Environmental Limitations
 1. Comply with the Sport Court® requirements.
 2. Adhere to all SDS requirements for materials employed in the work.
 3. Protect all persons from exposure to hazardous materials always.
- G. After athletic surfacing is installed and the game lines painted, the area is to be closed to allow curing time for the system, typically 3-5 days. No other trades or personnel are allowed on the floor until it has been accepted by the owner.

1.7 WARRANTY

- A. Sport Court® provides a limited warranty of fifteen (15) years on the materials it has supplied. (A copy of the full warranty, with its Terms and Exclusions, is available from the authorized Sport Court® Dealer.) This 15-Year Limited Warranty is subject to the Outdoor Game Court Warranty and all of its provisions. The Outdoor Game Court Warranty is expressly limited to the surfacing materials (goods) supplied by Sport Court®. During the period covered under the Outdoor Game Court Warranty, Sport Court® will repair/replace any defective tiles with the same or substantially similar product according to the schedule in the Outdoor Game Court Warranty. The 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 Sport Court® surfacing systems.

- B. Sport Court® 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 Sport Court® in writing within 30 days from the date buyer discovered, or should have discovered, any claimed breach.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Sport Court® PowerGame+™ modular athletic surfacing shall be:
1. Grid-top design.
 2. Size: 12.04" x 12.04" x 0.75" (30.58cm x 30.58cm x 19.1mm)
 3. High-impact polypropylene copolymer suspended modules.
 4. Shock absorbing support understructure.
 5. The tile shall have a 36-point positive locking system.
- B. Standard Colors: Bright Blue, Burgundy, Dark Blue, Evergreen, Green, Bright Red, Titanium, Sand, Gray, Steel Blue, Tennis Blue, Granite, Terracotta, Kiwi, Purple, Mustard, Pearl Orange, Black, Beige.
- C. Color Consistency: $\Delta E_{CMC} < 1.0$
- D. Weight: 0.73 lbs. (331 grams)
- E. Packaging: Product is shipped in pre-assembled sheets (2x4 modules per sheet, 5 sheets per box).
- F. Material Test Results
- | | | |
|----------------------------|-----------------------------|-------------------------------|
| 1. Rockwell hardness: | (ASTM D 785) | 65 R |
| 2. Heat deflection: | (ASTM D 648 @ 66 psi) | 180°F |
| | (ISO 75B-1, -2 @ 0.45 MPa): | 82°C Unannealed |
| 3. Tensile Yield Strength: | (ASTM D 638) | 2,900psi |
| | (ISO 527-1, -2) | 20 MPa |
| 4. Elongation at Yield: | (ASTM D 638) | 6% |
| | (ISO 527-1, -2) | 6% |
| 5. Notched Izod: | (ASTM D 256) | No break at 23°C |
| | (ISO 180) | 31kJ/m ² |
| 6. Charpy Notched Impact: | (ISO 179 @ 23°C) | 26kJ/m ² |
| 7. Density: | (ASTM D 792) | 0.90 specific gravity 23/23°C |
| | (ISO 1183 @ 23°C) | 0.90 g/cm ³ |
- G. Product Test Results
- | | | | |
|----------------------------|--------------------------------|------|------------|
| 1. Friction: | (EN 13036-4) | Dry: | 99 BPN |
| 2. Friction: | (EN 13036-4) | Wet: | 45 BPN |
| 3. Skin Abrasion: | (ASTM F1015) | | 19 % |
| 4. Shock Absorption: | (EN 14808) | | 16% |
| 5. Vertical Ball Behavior: | (EN 12235) | | 100% |
| 6. Critical Fall Height: | (ASTM F1292) | | 37 in |
| 7. Water Retention: | (SC-020) | | 1 ml |
| 8. Permeability: | (EN 12616) | | >2000 mm/h |
| 9. Flatness: | 0.0" (0.0mm) | | |
| 10. Lateral Forgiveness™: | +0.065" / -0" (+1.65mm / -0mm) | | |
- H. Load Bearing Capacity: 170 psi (1.17MPa)
- I. Sanitary Information:
1. Resistance to fungi (when tested in compliance with ASTM G-21 and MIL standard 810-D procedure 508.3). All basic organisms tested (ATCC #6205-11797) and were found to have zero growth.
 2. Resistance to the following:
 - a. Bacteria and mildew resistance
 - b. Gram-positive bacterial *Staphylococcus Aureus*
 - c. Gram-negative *Klebsiella Pneumoniae*

- d. Pink-staining organism
- e. STV Reticulum
- f. Surface fungi growth prior to and following leaching
- J. Game Line Paint:
 - 1. Adhesion promoter – proprietary tile adhesion promoter as supplied by Sport Court®.
 - 2. Paint – aliphatic polyurethane as recommended by Sport Court®. Select from standard colors.

PART 3 - EXECUTION

3.1 INSPECTION

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

3.2 INSTALLATION

- A. Sports surface shall be installed to pre-approved layout.
- B. Tiles shall be trimmed to accommodate thermal expansion and contraction according to *Sport Court® Concrete Size Adjustment Factors* document.
- C. Sports surface shall be clean and dust free.
- D. Game Lines
 - 1. Use only high-quality masking tape approved by Sport Court®.
 - 2. Lines shall be primed and painted using Sport Court® proprietary adhesion promoter and recommended aliphatic polyurethane paint.
 - 3. Provide game lines as indicated on drawings.
- E. Remove all excess and waste materials from the work area. Dispose of empty containers in accordance with federal and local statutes.

END OF SECTION 321823