



Distinctive Flooring & Athletic Surfaces

**ActionWood Ultimate Floor System**  
**Floating Resilient Floor System**

**Section 09 64 00**  
**Athletic Flooring**

**SYSTEM SUMMARY**

A combination of Allied's premium maple parquet with our high performance Herculon synthetic floor system consisting of a granular rubber mat, two-component urethane, and pigmented two-component waterborne color coat. All supported by a plywood subfloor system featuring Action AirTech II Natural Rubber pads.

Contact Allied Products, LLC at [www.alliedproductsllc.com](http://www.alliedproductsllc.com) or (800)864-1272 for specific project conditions or modifications of this specification.

**PART 1 – GENERAL**

**1.01 DESCRIPTION**

A. Related Sections: Cast-in-Place Concrete.

1. The general contractor shall provide a level slab, steel troweled to a tolerance of 1/8" (3mm) in a 10'0" (3m) radius and subject to the approval of the wood floor contractor.
2. Moisture barriers must be adequate for conditions.
3. MFMA does not acknowledge the use of FF/FL numbers to measure levelness/flatness tolerances in gymnasium concrete slabs.
4. Concrete shall not use river gravel or pea gravel and have an average of 3500 psi. compressive strength. Concrete must be cured for 60 days before installation can begin.
5. The concrete slab shall be depressed: 1-13/16" (46mm) for 7/16" (11mm) flooring.

**1.02 QUALITY ASSURANCE**

- A. All system component parts must be supplied by Allied Products, LLC.
- B. Manufacturer shall be an established firm experienced in field and have been in business a minimum of ten (10) years; as supplied by Allied Products, LLC. or an approved equal.
- C. Manufacturer shall be solvent with no bankruptcy proceedings the previous seven (7) years.
- D. The flooring contractor must be approved Allied Products, LLC.
- E. Flooring system shall be independently verified to meet or exceed the SCORES criteria for environmental design and athletic performance: Sustainable Construction of Renewable Engineered Surfaces.
- F. Carbon Evaluation must be inclusive and based on all corporate facilities; offices and mills.
- G. The manufacturer and flooring shall be independently verified by the guidelines of the ISO 14064-1:2006 World Resource Institutes Greenhouse Gas Protocol, Scope 1, 2 and 3.
- H. The manufacturer and flooring shall be independently verified by the guidelines of the ISO 14040:2006 and ISO 14044:2006 Life Cycle Assessment (LCA), confirming a negative carbon footprint.
- I. The manufacturer and flooring shall be registered in the Collaborative for High Performance Schools (CHPS) Product Database .

**1.03 SUBMITTALS**

- A. Manufacturers product data: Submit the **ActionWood Ultimate Floor** specification sheets.
- B. Samples: Submit one (1) sample of the **ActionWood Ultimate Floor** if requested by architect.

C. Maintenance literature: Submit one (1) copy of manufactures maintenance instructions.

#### **1.04 WORKING CONDITIONS**

- A. Flooring materials must be allowed to acclimate to building conditions on the job site in a dry, well-ventilated area, not in contact with masonry, and shall be installed at a moisture content not to exceed 8% except in areas of constant high humidity where the moisture content of the flooring shall not exceed 10%.
- B. The wood flooring shall not be installed until all masonry, plastering, tile, marble and terrazzo work is completed, and overhead mechanical trades and painters have finished in wood floor area. The building must be reasonably dry; all openings must be closed in; permanent heating and air conditioning installed and operating.
- C. The concrete slab shall be dry, free of foreign materials, and turned over to the wood flooring contractor broom clean. Moderate room temperature of 65 degrees (18 C) or more shall be maintained a week preceding and throughout the duration of the work. Humidity conditions within the building shall approximate humidity conditions which will prevail when the building is occupied. Care should be taken to maintain humidity within the range of 35% to 50%.
- D. Environmental Limitations
  - 1. Comply with requirements of athletic flooring material suppliers.
  - 2. Adhere to all MSDS requirements for materials. Protect all persons from exposure to hazardous materials.
  - 3. LEED - Leadership in Energy and Environmental Design, Comply with EQ 4.1 and EQ 4.2 principals. Utilize high postindustrial recycled content resilient base mat.

#### **1.05 WARRANTY**

- A. Allied Products, LLC. warrants the material it ships to be free from defects in materials and workmanship for a period of one year and the flooring installer warrants the installation of the flooring to be free of defects in materials and workmanship for a period of one year. The exclusive remedy under this warranty shall be replacement of defective material supplied by Allied Products, LLC. or correction of defective installation by the flooring installer. All implied warranties of merchantability or fitness for intended use are limited to the period of this warranty. This warranty excludes consequential damages.
- B. This warranty does not cover damage caused by fire, winds, floods, chemicals, or other abuse, or by failure of other contractors to adhere to specifications, or neglect of reasonable precaution to provide adequate ventilation during hot and humid weather. This warranty also excludes damage due to excessive dryness or excessive moisture from humidity, spillage, migration through the slab or wall or any other source. This warranty also excludes damage to floors due to ordinary wear and tear, faulty construction of the building, (other than the flooring installation), separation of the concrete slab underlying the floor, settlement of the walls, or use of water on the floor.
- C. During the warranty period, the floor cannot be coated without the permission of the floor contractor.

**PART 2 - PRODUCTS**

**2.01 MATERIALS**

**A. Wood Flooring**

1. Flooring shall be Northern Hard Maple parquet, 7/16" (11mm) thick panels, 9" (229mm) wide and 18" (450mm) long, MFMA-PQ grade marked as supplied by Allied Product, LLC. (optional 5/16" (8mm) thick).
2. Grades available are MFMA-PQ 2nd&Btr., 3rd&Btr. and 3rd grade.
3. FSC Certified lumber (optional).

**B. Wood Flooring Adhesive**

1. Wood Flooring adhesive shall be single component elastomeric polyurethane or PVA adhesive when suitable, for use with parquet.

**C. Allied's Two-Component Urethane Flooring 9+2 System (11mm).**

1. BASE MAT ADHESIVE (UN 700), two-component polyurethane, shall bond rubber base mat to plywood. It shall be applied at a rate of approximately .2/lbs / cubic foot minimum.
2. BASE MAT, base mat shall be prefabricated rubber mat made of all recycled rubber granules bound with MDI polyurethane and a constant thickness. The base mat shall have a density of 45-lbs./cubic foot minimum mat thickness shall be furnished per architectural specification requirements.
3. SCRATCH COAT (EG 120), two-component, thixotropic polyurethane compound applied at a rate of 0.18 lbs. / cubic foot.
4. TROWEL COAT (SX 400), two-component, pigmented, self-leveling polyurethane compound applied monolithically over the base mat to a 2mm thickness. Color to be manufacturer's standard color.
5. WEAR COAT (PU 150), two-component polyurethane applied at a rate of 0.03lbs. / square foot. Colors to be selected from manufacturer's standard color chart.
6. Game line paint shall be two-component polyurethane.

VOC Emission Requirements, grams per liter

1. Adhesive	0	Grams per Liter
2. Sealer	10	Grams per Liter
3. Polyurethane	60	Grams per Liter
4. Color Coating Urethane Paint	75	Grams per Liter
5. Line Paint	75	Grams per Liter

**D. Subfloor**

1. Vapor barrier shall be 6-mil polyethylene.
2. The resilient pads shall be AirTech II 7/16" (11mm) natural rubber pads.
3. Panels shall be 15/32" x 4' x 8' (12mm x 1.2M x 2.4m) 4ply CD face exposure 1, rated plywood.
4. Construction adhesive between layers of plywood applied as a "Box-X" pattern.

**E. Fasteners**

1. Subfloor fasteners shall be 1" (25mm) coated staples.

**F. Wall Base**

1. Wall base shall be 3" x 4" (76mm x 102mm) vented cove base with pre-molded outside corners as supplied by Allied Products, LLC. (specify black or brown)

G. Protective Floor Cover (optional)

1. Action AirRide cover system with patented air blower system. System includes Phthalate-free, seamless 10'-0" wide, 20.5 ounce vinyl covers and A-frame rack.

**PART 3 - EXECUTION**

**3.01 INSPECTION**

- A. Inspect concrete slab for proper tolerance and dryness reporting any discrepancies in writing to the general contractor.
- B. All work to put the concrete slab in acceptable condition shall be the responsibility of the general contractor.
- C. Slab shall be broom cleaned by the general contractor.

**3.02 SUBFLOOR INSTALLATION**

- A. Cover concrete slab with polyethylene lapping edges 6" (150mm) and seal with adhesive or 2" (50mm) duct tape.
- B. AirTech II pads shall be attached to the underside of the first layer of plywood as specified by the manufacturer.
- C. Place the first layer of padded plywood at a 45-degree angle to the intended direction of the finish maple flooring in a brick pattern.
- D. Fasten the second layer of plywood without pads at a 45-degree angle or at right angles to the first layer. Apply construction adhesive in a box "x" pattern to the bottom side of the plywood. The plywood sheets must be nailed or stapled together with 1" (25mm) fasteners starting from the center of the sheet and working outward. At perimeter of sheet, fasten approximately 2" (50mm) from edge of sheets at 4" (102mm) on center across and rows 6" (300mm) on center. No joint in the second layer of plywood shall coincide with a joint in the first layer. Allow 1/8" (6mm) gap between panels at sides and edges, and a 2" (50mm) expansion void at walls and all vertical obstructions on both layers of plywood.

**3.03 MAPLE FLOOR INSTALLATION**

- A. Trowel on adhesive at spread rate recommended by adhesive manufacturer and approved by Allied Products, LLC.
- B. Install wood parquet in freshly applied adhesive either straight line or block pattern. Install leaving hairline cracks for expansion except in low humidity areas. Provide 2" (50mm) expansion voids at perimeters and all vertical obstructions.

**3.04 FLOOR SANDING**

- A. Use coarse, medium and fine grade sandpaper.
- B. After sanding, buff entire floor using 100-grit screen or equal grit sandpaper, with a heavy-duty buffing machine.
- C. Vacuum or tack floor before first coat of finish.
- D. Floor shall present a smooth surface without drum stop marks, gouges, streaks or shiners.

### **3.05 FINISHING**

- A. Inspect entire area of floor to ensure that the surface is acceptable for finishing, completely free of sanding dust and perfectly clean.
- B. Apply seal and finish per manufacturer's instructions.
- C. Buff and vacuum or tack between each coat after it dries.
- D. Apply game lines accurately after the seal coat, after buffing and vacuuming. Lay out in accordance with drawings. For game lines, use current rules of association having jurisdiction. Lines shall be straight with sharp edges in colors selected by the architect. Game line paint shall be compatible with finish.

### **3.06 SYNTHETIC FLOOR INSTALLATION**

- A. Mix the two-component polyurethane adhesive and apply directly to the subfloor at the specified rate with the specified notched trowel. Immediately unroll pre-relaxed mat into freshly applied adhesive. Roll base mat with heavy roller.
- B. Thoroughly mix two-component scratch coat. Apply two coats of scratch coat to rubber base mat with a flat steel trowel. Allow each coat to cure before proceeding to the next application. After second coat has cured, inspect base mat for ridges and voids. Sand raised ridges, and fill voids as needed.
- C. Thoroughly mix two-component trowel coat. Apply mixed material using recommended notched trowel, or notched squeegee to a thickness of 2mm. Materials must be applied continuously to create a seamless surface. Allow topcoat to cure before proceeding to next step. Repair any imperfections in the finished surface. Clean floor with a vacuum, broom, or dry dust mop. Tack clean prior to proceeding.
- D. Thoroughly mix two-component polyurethane wear coat. Apply wear coat material with a high solvent resistant paint roller at the specified rate. Allow wear coat to cure before applying game lines.
- E. Using the highest quality masking tape, tape the floor. Thoroughly mix the two-component game line paint, and paint between the tape. Remove all tape prior to the paint curing.

### **3.07 BASE INSTALLATION**

- A. Affix rubber base to wall with recommended adhesive or screws. Miter all corners carefully. Use premolded outside corners. Install aluminum thresholds as required, anchoring firmly in concrete floor beyond limits of wood flooring.

### **3.08 CLEAN UP**

- A. Clean up all unused materials and debris and remove from premises, properly dispose of all waste materials.

### **3.09 MAINTENANCE**

- A. Upon completion of floor installation, the owners, attendants or individuals in charge and responsible for the upkeep of the building are to see that the care and maintenance instructions of the manufacturer are followed. Failure to do so may void warranty.