

SECTION 09 65 66
ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING

PART 1 – GENERAL

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
 - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
 - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
 - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
 - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
 - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
 - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
 - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
 - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
 - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
 - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
 - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
 - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
 - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
 - 1. Installer to submit the indoor resilient dance floor surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
 - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
 - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
 - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Tarkett Sports / FieldTurf USA, Inc. recommendations.
- B. Storage:
 - 1. Store the material in a secure, clean and dry location.
 - 2. Maintain temperature between 55° and 85° Fahrenheit.
 - 3. Store the indoor resilient dance floor surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
 - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient dance floor flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 9 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F_F) of 50 and an (F_L) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
 - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
 - 1. Material warranties from separate or third party insurance providers are not valid.
 - 2. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
 - 1. Material manufacturing defects.
 - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
 - 3. Failure due to substrate moisture exposure exceeding 90 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
 - 1. For material defects and surface wear-through: **10** years from date of substantial completion.
 - 2. For moisture vapor tolerance: **10** years from date of substantial completion.
- E. Installer's Limited Warranty:
 - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
 - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient dance floor surfacing used on the project.

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PART 2 - PRODUCTS

2.1 ***MATERIALS***

- A. Prefabricated dance floor surfacing 3.5 mm with slightly textured embossed surface.
 - 1. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
 - 2. The foam force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
 - 3. Laminated or adhered foam layers will not be allowed.
 - 4. Field constructed products will not be accepted.
- B. Adhesive moisture mitigation combination. Provide non-solvent reactive topically applied moisture mitigation/adhesive according to manufacturer's recommendations.
- C. Physical properties of the indoor resilient dance floor surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	49' (15 m) approx.
Wear Layer	—	2 mm
Total Thickness	—	3.5 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Force Reduction	PASSED	ASTM F2772 Class 1
Slip Resistance	P3	AS 4586
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Abrasion Volume Loss	Group T: ≤2.0 mm ³	EN 660: Part 2
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	61dB (NF S31-074)
Fire Rating	PASSED	ASTM E648 Class 1
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

- 1. Color: As available from the indoor resilient dance floor surfacing manufacturer's standard range.
- C. Welding Rod: As supplied by the indoor resilient dance floor surfacing manufacturer or supplier.
 - 1. Color to blend with the indoor resilient dance floor surfacing color or design.
 - 2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient dance floor surfacing manufacturer.

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PART 3 - EXECUTION

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient dance floor surfacing.
- B. Verify that the area in which the indoor resilient dance floor surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient dance flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor: moisture content less than 83% RH when tested per ASTM F2170.
- G. Follow Tarkett Sports / FieldTurf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient dance floor surfacing installer. The indoor resilient dance floor surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient dance floor surfacing in strict accordance with the indoor resilient dance floor surfacing manufacturer's written instructions.
- D. Install the indoor resilient dance floor surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Install appropriate threshold plates or transition strips where necessary.

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3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient dance floor surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient dance floor surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

END OF SECTION