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PRODUCT GUIDE SPECIFICATION

SECTION 02790

ATHLETIC AND RECREATIONAL ACOUSTIC SURFACING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Resilient interlocking acoustic fitness flooring.

1.2 RELATED SECTIONS

- A. Section 03300 - Cast-in-Place Concrete: Concrete subsurface.

1.3 REFERENCES

- A. ASTM D 395 - Standard Test Methods for Rubber Property—Compression Set.
- B. ASTM D 412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension.
- C. ASTM D 624 - Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers.
- D. ASTM D 1667 - Standard Specification for Flexible Cellular Materials-Vinyl Chloride Polymers and Copolymers (Closed-Cell Foam).

- E. ASTM D 2047 - Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine.
- F. ASTM D 2859 - Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials.
- G. ASTM E 648 - Critical radiant flux of floor covering systems
- H. ASTM E 303 - Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester.
- I. ASTM E90 - Airborne Sound Transmission (over 6" Concrete Slab)
- J. ASTM E492 - Impact Sound Transmission (over 6" Concrete Slab)
- K. ASTM E2179 - Effectiveness in Floor Coverings (over 6" Concrete Slab)

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Selection Samples: Please visit our website at: <https://www.sofsurfaces.com/> to request samples of Plus Series colors or Premium Series Color blends.
- D. Verification Samples: For each finished product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.
- E. Certificate of Compliance: Submit manufacturer's certificate of compliance indicating materials comply with specified requirements.
- F. Manufacturer's Project References:
 - 1. Submit list of successfully completed projects.
 - 2. Include project name and location, name of architect, and type and quantity of surfacing furnished.
- G. Installer's Project References:
 - 1. Submit list of successfully completed projects.
 - 2. Include project name and location, name of architect, and type and quantity of surfacing installed.
- H. Maintenance Instructions: Submit manufacturer's maintenance and cleaning instructions.
- I. Warranty: Submit manufacturer's standard warranty.

1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Manufacturer shall meet at least one of the following requirements.
 - 1. Continuously engaged in manufacturing of surfacing products of similar type to that specified, with a minimum of 10 years successful experience.
 - 2. Furnished a minimum of 1,000,000 square feet per year of surfacing products of similar type to that specified.
- B. Installer's Qualifications:
 - 1. Specific training not required.
 - 2. Basic guidance and direction provided by manufacturer.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage:
 - 1. Store materials in accordance with manufacturer's instructions.
 - 2. Store materials in a dry storage area at a minimum temperature of 50 degrees F (10 degrees C) for a minimum of 72 hours before installation.
 - 3. Store materials to be installed indoors at the ambient temperature of the installation location for a minimum of 48 hours before installation.
 - 4. Protect materials from direct sunlight before installation.
 - 3. Store adhesive in a dry area at a minimum temperature of 50 degrees F (10 degrees C).
- C. Handling: Protect materials during handling and installation to prevent damage.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
 - 1. Material Temperature: Ensure surface temperature of surfacing tiles is a minimum of 50 degrees F (10 degrees C) at time of installation.
 - 2. Air Temperature for Interior Installations: Ensure air temperature is at the same temperature as anticipated during normal operation.

1.8 WARRANTY

- A. Materials and Workmanship: Acoustic fitness flooring shall be warranted for defects in materials and workmanship for a period of 10 years.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Acceptable Manufacturer: **sofSURFACES Inc.**, which is located at:
4393 Discovery Line, Petrolia, ON, Canada N0N 1R0
Toll Free Tel: **800-263-2363** Tel: **519-882-8799**
Email: info@sofsurfaces.com Web: www.sofsurfaces.com/durasound
- B. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 ACOUSTIC FITNESS FLOORING

- A. Tiles: duraSOUND® Rubber Acoustic Tiles

Specifier Notes: Specify Plus Series or Premium Series Acoustic Flooring tiles.

Specify Plus series on general applications where custom color combinations are not a primary design requirement. Specify Premium series when increased color stability or a wider range in unique color blends with or without floor graphics are desired. Consult sofSURFACES for assistance in determining required series.

1. Series: [Plus] [Premium 10% Color, 35% Color, 70% Color or 95% Color EPDM Skin Series Blends].
2. Description: Resilient, interlocking, acoustic fitness flooring tiles.
3. Material: Compression-molded, recycled rubber and binding agents.
5. Tile Locking: U-shaped male and female configuration on all 4 sides to lock tiles to adjacent tiles.
6. Top Edges: Chamfered.
7. Tile Bottom: Hollow core stanchion pattern
8. Wear Layer: PLUS Series is compression molded to obtain optimum density and durability. PREMIUM Series features a blended EPDM skin for maximum color performance and wear durability.

Specifier Notes: Specify wear layer for Plus or Premium series acoustic fitness tiles.

- a. Plus Series: Combination of elongated SBR rubber and granulated crumb rubber. Pigmentation used to achieve color. Minimum 0.375 inch thick.
 - b. Premium Series: Virgin EPDM rubber granules. Minimum 0.118" (3 mm) inch thick.
9. Manufactured Size:
Plus Series: 24 1/4" x 24 1/4" +/- 1/8".
Premium Series Blends: 24 3/8" x 24 3/8" +/- 1/8"

Specifier Notes: Specify minimum weight of each tile based on Plus or Premium Series and required thickness.

10. Minimum Weight Each Tile:

a. Plus Series Solid Colors: [Midnight Black] [Terracotta] [Turf Green] [Ocean Blue] [Saddle Brown] [Slate Gray]:

- 1) 2.00-Inch Thickness: 25.00 pounds. (all colors)
- 2) 2.75-Inch Thickness: 29.00 pounds. (all colors)

b. Premium Skin Series color Blends (all blends):

10% Color: [Black] [Blue] [Red] [Yellow] [Green] [Light Gray] [Medium Gray]
35% Color: [Pewter] [Ivory] [Pumpkin Spice] [Sapphire] [Shamrock] [Lava]
70% Color: [Smoke] [Aquamarine] [Forest Green] [Red Rock]
95% Color: [Sedona] [Sierra Brown] [Tuscan Red] [Denim] [Safari] [Graphite]
[Sangria] [Emerald Green] [Azure]

- 1) 2.00-Inch Thickness: 26.45 pounds. (all blends)
- 2) 2.75-Inch Thickness: 30.70 pounds. (all blends)

11. Colors:

Specifier Notes: Specify solid Plus Series Colors or Premium Series Rubber Acoustic Surfacing tiles. Any combination of colors within a series can be used to create a unique appearance. Plus Series solid colors may NOT be combined with Premium Series Color blends. For custom color blends, please consult sofSURFACES for pricing, availability and lead times.

a. Plus Series Solid Colors: [Terra Cotta] [Turf Green] [Black] [Ocean Blue] [Saddle Brown] [Slate Grey] [As indicated on the Drawings].

b. Premium Skin Series Color Blends:

10% Color: [Black] [Blue] [Red] [Yellow] [Green] [Light Gray] [Medium Gray]
35% Color: [Pewter] [Ivory] [Pumpkin Spice] [Sapphire] [Shamrock] [Lava]
70% Color: [Smoke] [Aquamarine] [Forest Green] [Red Rock]
95% Color: [Sedona] [Sierra Brown] [Tuscan Red] [Denim] [Safari] [Graphite]
[Sangria] [Emerald Green] [Azure] [Other/Custom: _____]
[As indicated on the drawings].

B. Test Results:

Specifier Notes: Specify test results for Plus or Premium Series duraSOUND Rubber Acoustic Tiles.

1. ASTM E 303:
 - a) Dry [Plus]: 102 Dry [Premium]: 53
 - b) Wet [Plus]: 62 Wet [Premium]: 32

2. ASTM D 2047:
 - a) Dry [Plus]: 0.81 Dry [Premium]: 0.97
 - b) Wet [Plus]: 0.82 Wet [Premium]: 0.91

3. Compression Deflection, ASTM D 1667: 29.5 psi to 25% compression.

4. Compression Set, ASTM D 395: 4.37% permanent set.

5. Tensile Strength, ASTM D 412:
 - a. Plus Series: 107 psi.
 - b. Premium Series: 331 psi.

6. Elongation at Break, ASTM D 412:
 - a. Plus Series: 165%.
 - b. Premium Series: 105%.

7. Tear Strength, ASTM D 624:
 - a. Plus Series: 60 pli
 - b. Premium Series: 64 pli

8. Flammability:
 - a. Burning Pill, ASTM D 2859: Meets Standard
 - b. Critical Radiant Flux, ASTM E 648: Class II

9. Durometer Hardness, ASTM D 2240:
 - a. Plus Series: 50
 - b. Premium Series: 60

10. Density Foam, ASTM D 3676:
 - a. Plus Series: 51 pcf.
 - b. Premium Series: 904.77 kg/m³

11. Taber Abrasion, Wear index, ASTM C 501:
 - a. Plus Series: 140
 - b. Premium Series: 167

12. Sound Transmission Class (STC)
ASTM E90 Airborne Sound Transmission:
2.0": 54
2.75": 57
13. Impact Insulation Class (IIC)
ASTM E492 Impact Sound Transmission:
2.0": 62
2.75": 64
14. Impact Insulation Class (Δ IIC)
ASTME2179 Effectiveness in Floor Coverings:
2.0": 27
2.75": 28

C. Accessories:

1. Corners:
 - a) Prefabricated outside and inside corner ramps.
 - b) Material: Same as surfacing tiles.
2. Ramps:
 - a) Prefabricated Ramps: "sofRAMP".
 - b) Prefabricated ADA-Compliant Ramps: "sofRAMP ADA".
 - c) Material: Same as surfacing tiles.

Adhesive: Furnished by manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive fitness flooring tiles. Do not begin installation until unacceptable conditions have been corrected.

3.2 PREPARATION

- A. Prepare subsurface in accordance with manufacturer's instructions.

Specifier Notes: Include the following paragraph when adhesive will be used between a concrete subsurface and the base of the fitness flooring
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C. Concrete Subsurface:

1. Concrete subsurface shall be as specified in Section 03300 (03 30 00).
2. Apply light broom finish.
3. Ensure concrete is sound with no loose material or cracks over 1/8 inch wide.
4. Ensure concrete is a minimum of 10-15 days old.

3.3 INSTALLATION

- A. Install fitness flooring in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Ensure prepared subsurface and tiles are dry and clean.
- C. Layout tile surface in accordance with manufacturer's instructions.
- D. Apply adhesive in accordance with manufacturer's instructions for all keystone, strategic tile rows, and transitional edging.
- E. Installation to be completed by a factory trained and certified installer.

3.5 CLEANING

- A. Clean tiles in accordance with manufacturer's instructions.

3.6 PROTECTION

- B. Protect completed flooring from damage during construction.

END OF SECTION