MOOSE SPORT®

Moose Sports Surfaces, Ltd.
www.MooseSports.com

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DIVISION 9 Finishes - SECTION 09 65 00 Resilient Flooring
Prefabricated sport surfaces with vulcanized two-layer construction

PART I.0: GENERAL

1.1 SUMMARY

A. The work of this section includes:
   1. SportLastic for indoor ONLY applications
   2. Direct full spread adhesive to concrete subfloor using T-111 2-component polyurethane adhesive

1.2 REFERENCES

A. *Standards listed by reference, including revisions by issuing authority, form a part of this specification section to the extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.*

B. ASTM International (ASTM)
   1. ASTM D412: Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension.
   2. ASTM D2240: Standard Test Method for Rubber Property (Durometer Hardness).
   3. ASTM D3389: Standard Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform Abrader).
   4. ASTM F925: Standard Test Method for Resistance to Chemicals of Resilient Flooring.
   5. ASTM F1514: Standard Test method for Measuring Heat Stability of Resilient Flooring by Color Change.
   6. ASTM F1515: Standard Test Method for Measuring Light Stability of Resilient Flooring by Color Change.
   7. ASTM F2772: Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems.
   8. ASTM F2157: Standard Specification for Synthetic Surfaced Running Tracks
   9. ASTM F2117: Standard Test Method for Vertical Rebound Characteristics of Sports Surface
   10. ASTM E303: Standard Test Method for Measuring Surface Frictional Properties
   11. ASTM F2569: Standard Test Method for Evaluating the Force Reduction Properties of Surfaces for Athletic
   12. ASTM E648: Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source.

C. EN European Committee for Standardization (EN)
   1. EN 13036-4: Road and airfield surface characteristics. Test methods -the pendulum test for friction.
   2. EN 14808: Surfaces for sports areas. Determination of shock absorption.
   3. EN 14809: Surfaces for sports areas. Determination of vertical deformation.
   4. EN 12235: Surfaces for sports areas - Determination of vertical ball behavior

D. GREENGUARD Environmental Institute (GEI)
   1. GREENGUARD Certification: Compliant with stringent emission levels for over 360 VOCs, plus a limit on the total of all chemical emissions combined (TVOC).

2. GREENGUARD Gold Certification: Compliant with safety factors to account for sensitive individuals (such as children and the elderly) and ensure that a product is acceptable for use in environments such as schools and healthcare facilities.

E. REACH
1. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing. European Chemicals Agency.

F. SVHC
1. Candidate List of substances of very high concern for Authorization (published in accordance with Article 59(10) of the REACH Regulation)

1.3 SYSTEM DESCRIPTION

A. *Performance Requirements: Prefabricated sport surface vulcanized in two layered construction, consisting of EPDM, natural rubber, mineral fillers, stabilizing agents, color pigments, and a non-permeable, textured wear resistant shock absorbing surface layer, bonded by vulcanization, which has been manufactured and installed to maintain performance criteria stated by supplier without defects, damage, or failure.*

1.4 SUBMITTALS

A. Product Data: Submit product data and guide specifications for specified products.
B. Shop Drawings: Submit shop drawings showing layout, profiles and product components, finish colors, patterns, and textures.
C. Samples: Submit selection and verification samples for finishes, colors, and textures.
D. Quality Assurance Submittals: Submit the following:
1. Supplier's installation instructions.
2. Supplier's warranty.
E. Closeout Submittals: Submit the following:
1. Supplier's Care and Maintenance Data.
2. Supplier's Warranty.

1.5 QUALITY ASSURANCE

A. Qualifications:
1. Installer Qualifications: Installer experienced in performing work of this section, who has specialized in installation of work similar to that required for this project.
a. Certificate: When requested, submit a document indicating the qualification of the installer.

B. Supplier's production process must be ISO 9001 and ISO 14001 certified.

1.6 DELIVERY, STORAGE & HANDLING

A. Ordering: Comply with supplier's ordering instructions and lead time requirements to avoid construction delays.
B. Delivery: Store sports flooring in original wrappings with label intact until time of installation.
C. Storage and Protection: The general contractor shall provide an indoor, secure, clean and dry storage location protected from exposure to harmful weather conditions. Storage temperature to be between 65 - 104°F (18 - 40°C).
D. Keep rolls well positioned in an upright position on the pallet, and do not stack anything on top. Do not stack rolls.

1.7 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 flooring.
B. The area in which the flooring 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 flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
D. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the flooring installation is completed or suspended.

E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
F. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation. Max temperature 104°F.
G. 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.
H. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
I. Concrete subfloor should be no greater than 1/8" within a 10’ diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (FF) of 50 and an (FL) 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 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.
J. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
K. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the supplier’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.
L. Refer to ACI 302.2R “Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials” for concrete design and construction.
M. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.
N. Moisture content must be less than 90% RH when tested per ASTM F2170. 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.

1.8 WARRANTY

A. Supplier’s Warranty: Submit, for owner’s acceptance, supplier’s standard warranty document executed by authorized company official. Supplier’s warranty is in addition to and not a limitation of other rights the owner may have under Contract Documents.
    1. Warranty Period: Limited Warranty against manufacturing defects in material for a period of One (1) year from the date of purchase and a Ten (10) years Excessive Wear Period commencing on Date of Substantial Completion.

1.9 ADDITIONAL MATERIALS

A. Extra Materials: Deliver to owner extra materials from the same production run as products installed. Package products with protective covering. Quantity: Furnish quantity of flooring units equal to [specify %] of amount installed.
    1. Delivery, Storage and Protection: Comply with owner’s requirements for delivery, storage, and protection of extra materials.

PART 2.0 – PRODUCTS

2.1 SUPPLIER

A. Moose Sports Surfaces, Ltd.
Address: 2257 N Wayne Ave. Chicago, IL 60614
TEL: (773) 477-4664
Email: info@moosesports.com

2.2 PRODUCT(S)

A. The Basis of Design is SportLastic as supplied by Moose Sports Surfaces, Ltd.
B. Prefabricated sport surface vulcanized in two layered construction, consisting of EPDM, natural rubber, mineral fillers, stabilizing agents, color pigments, and a non-permeable, textured wear resistant shock absorbing surface layer, bonded by vulcanization from a single supplier.

C. See last page of this specification for Product Technical Data minimum requirements.
D. Specify Thickness: 6mm, 8mm, 10mm.
E. Specify ROLL.
F. Specify Color(s): Colors to be chosen from supplier's standard colors.

2.3 PRODUCT SUBSTITUTIONS

A. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
B. Physical properties and testing must conform to the minimums listed in the Product Technical Data.
C. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.4 RELATED MATERIALS

A. Refer to other sections listed in Related Sections paragraph herein for related materials.

PART 3.0 – EXECUTION

3.1 SUPPLIER'S INSTRUCTIONS

A. Compliance: Comply with supplier's product data, including product technical bulletins, product catalog installation instructions, and product carton instructions for installation.

3.2 EXAMINATION

A. Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with Section 1.7 Project / Sight Conditions.

3.3 SURFACE PREPARATION

A. Prep the slab in strict accordance with the supplier's installation instructions.
B. Sand the entire surface of the concrete slab.
C. 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.
D. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary.
E. Follow OSHA guidelines.

3.4 INSTALLATION

A. Install the flooring in strict accordance with the supplier's installation instructions.
B. Refer to other sections listed in Related Sections paragraph herein for related products installation.
C. The installation area shall be closed to all traffic and activity during installation.
D. If game lines are specified, paint game lines using approved game line primer and game line paint in strict accordance with the supplier's instructions.

3.5 CLEANING

A. Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with supplier's instructions prior to owner's acceptance. Remove construction debris from the project site and legally dispose of debris.

3.6 PROTECTION

A. Protect the installed product from damage using coverings approved by the supplier until acceptance of work by the customer or their authorized representative.

Product Technical Data for SportLastic Indoor ONLY					
			Thickness		
Test items	**Test Methods**	**Requirements**	**6mm**	**8mm**	**10mm**
Elongation at break	ASTM D412	≧100%	≧200%	≧200%	≧200%
Tensile Strength	ASTM D412	≧75psi	≧210psi	≧210psi	≧210psi
Hardness of wear layer	ASTM D2240	**	58±5	58±5	58±5
Hardness of backing	ASTM D2240	**	38±5	38±5	38±5
Abrasion resistance (H18,1KG,1000cycles)	ASTM D3389	≤2.0g	≤1g	≤1g	≤1g
Resistance of Chemicals	ASTM F925	≤Slight Change	Compliant	Compliant	Compliant
Color Heat stability	ASTM F1514	≤8.0△E	0.37	0.37	0.37
Color Light stability	ASTM F1515	≤8.0△E	1.57	1.57	1.57
Friction (Dry)	ASTM E303	80~110	≥90	≥90	≥90
Shock Absorption	ASTM F2569	>10%	13±3%	16±3%	19±3%
Vertical deformation	ASTM F2157	<3.5mm	0.7±0.3mm	0.8±0.3mm	0.8±0.3mm
Ball rebound	ASTM F2117	>90%	96%±3	96%±3	96%±3
Critical Radiant Flux	ASTM E648	≥0.1w/cm2	Compliant		
GREENGUARD Certification	GREENGUARD	Compliant	Compliant		
GREENGUARD Gold	GREENGUARD	Compliant	Compliant		
REACH SVHC items	REACH	Compliant	Compliant		
Surface finish	Supplier		Embossed		
Roll Dimensions	Supplier		Width: 100cm to 140cm (3’ 4” to 4’ 4’7”) Length: 6M to 20M (19’ 8” to 65’ 7”)		
Roll Thicknesses	Supplier		6mm, 8mm,10mm		
Colors	Supplier		SportLastic - Moose Sport Surfaces, LTD.		

END OF SECTION