

3-PART SPECIFICATION SECTION 096113

PART 1: GENERAL

1.01 Summary

A. Section Includes: EVA-rubber copolymer tile wet area surfacing system.

Specifier Note: Revise paragraph below to suit project requirements. If a reader of this section could reasonably expect to find a product or component specified in this section, but it is actually specified elsewhere, then the related section number(s) should be listed in the paragraph below. In the absence of related sections, delete paragraph below.

Specifier Note: Site materials and methods, drainage, attractions, fencing, substrate preparation and similar work are provided by others and are described in other sections. Edit, retain or delete paragraph below to suit project requirements and specifier practice.

A. Related Sections: Division 2 Sitework Sections: Materials and Methods, Excavation, Asphalt Paving, Concrete Paving, Sub-Drainage, Storm Drainage, Fencing, Playground Equipment and Structures.

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain References Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Division 1 References Section may establish the edition date of standards. This article does not require compliance with standard. It is a listing of all references used in this section.

1.02 References

A. American Society for Testing and Materials (ASTM):

1. AS HB198:2014 Pendulum With TRL (55) Soft Rubber Slider Flooring Slip Resistance Test: Ripple 2.0 Pattern Dry 119, Wet 66
2. ASTM E648-03 is for "Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source - Passed
3. ASTM E303 Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester: Slate Pattern: 34.90; Slate Smooth: 33; Ripple 2.0 Pattern: 44.75
4. ASTM F1292 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment: Critical Fall Height 1' or More.
5. Toxic Characteristic Leaching Procedure (TCLP) (RCRA) by Method 30106. NSF Standard 50:26 Interactive Waterplay Venue Surfacing Systems - Certified



Specifier Note: Article below should be restricted to statements describing design or performance requirements and functional (not dimensional) tolerances of a complete system. Limit descriptions to composite and operational properties required to link components of a system together and to interface with other systems.

1.03 System Description

A. Performance Requirements: Provide a single layer EVA-rubber copolymer tile wet area surfacing system which has been designed, manufactured and installed to meet the following criteria:

1. Shock Attenuation (ASTM F1292) – 3/8” meets 1’ critical fall height; 7/8” meets 4’ critical fall height; 1 ¼” meets 6’ critical fall height
 - a. Gmax - Less than 200.
 - b. Head Injury Criteria - Less than 1000.
2. Flammability (ASTM E648) – Class 1
3. Toxic Characteristic Leaching Procedure (TCLP) (RCRA) by Method 3010 – Pass.
4. NSF Certified to Standard 50:26 Interactive Waterplay Venue Surfacing Systems
 - a. In order to achieve certification products must pass specific performance measures for slip-resistance, impact absorption, chemical resistance, cleanability, UV resistance, and impermeability

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect’s and Contractor’s duties and responsibilities in Conditions of the Contract and Division 1 Submittal Procedures Section.

1.04 Submittals

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section. Please contact manufacturer.
- B. Product Data: Submit manufacturer’s product data and installation instructions.
- C. Verification Samples: Submit 1 24x24” full size sample for texture and thickness verification. Color verification to come in standard manufacturer sample packets, texture and thickness subject to inventory.
- D. Quality Assurance/Control Submittals: Submit the following:
 1. Certificate of qualifications of the certified installers.
- E. Closeout Submittals: Submit the following:
 1. Warranty documents specified herein.

Specifier Note: Article below should include statements of prerequisites, standards, limitations and criteria that establish an overall level of quality for products and workmanship for this section. Coordinate article below with Division 1 Quality Assurance Section.



1.05 Quality Assurance

A. Qualifications: Utilize an installer having experience with projects of similar scope and complexity, certified by the manufacturer.

Specifier Note: Article below should include specific protection and environmental conditions required during storage. Coordinate article below with Division 1 Product Requirements Section.

1.06 Delivery, Storage, and Handling

A. General: Comply with Division 1 Product Requirement Section.

B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

C. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at a minimum temperature of 20 degrees F (-7 degrees C) and a maximum temperature of 100 degrees F (38 degrees C).

Specifier Note: In article below, state physical or environmental limitations or criteria for installation such as weather, temperature, humidity, ventilation or illumination required for proper installation or application.

1.07 Project/Site Conditions

A. Environmental Requirements: Install surfacing system when minimum ambient temperature is 60 degrees F (1 degree C) and maximum ambient temperature is 90 degrees F (32 degrees C). Do not install in rain.

Specifier Note: Coordinate article below with Conditions of the Contract and with Division 1 Closeout Submittals (Warranty) Section. Use this article to require special or extended warranty or bond covering the work of this section.

1.08 Warranty

A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.

B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under contract documents.

C. Proper drainage is critical to the longevity of the Life Floor® surfacing system. Inadequate drainage will cause premature breakdown of the system in affected areas; and void the warranty.

Specifier Note: Coordinate subparagraph below with manufacturer's warranty requirements.



Express Limited Warranty

Life Floor® warrants all 7/8" and 3/8" thick Life Floor® tiles for orders under 2,000 sq ft and all orders installed by a Preferred Installation Partner to be free of defect in workmanship or materials for a term of five (5) years from the date of delivery of the Products (the "Warranty Period"). Life Floor® warrants all 7/8" and 3/8" thick Life Floor® tiles for orders over 2,000 sq ft installed by Certified Installers for a period of two (2) years from the date of delivery of products. For orders over 2,000 sq ft with no certified installation, Life Floor® warrants products for 1 year to be free of defect. Life Floor® warrants all 3/16" thick Life Floor® tile orders under 2,000 sq ft and installed by a Preferred Installation Partner to be free of defects in workmanship or materials for a term of three (3) years from the date of delivery of the Products (the "Warranty Period"). Life Floor® warrants all 3/16" thick Life Floor® tile orders installed by a Certified Installer for 2 years from the date of delivery of products, and for 1 year for all orders over 2,000 sq ft with no certified installation. Warranty includes coverage against degradation of the complete texture. Warranty does not cover color changes of any kind. Life Floor® requires Preferred Installation Partners to warrant all installation services they provide to be free of defects in workmanship and adhesion for a term of two (2) years from the date of completion of the installation of the Products (the "Warranty Period"). Life Floor® requires Certified Installers to warrant all installation services they provide to be free of defects in workmanship and adhesion for a term of one (1) year from the date of completion of the installation of the Products (the "Warranty Period").

Limitations to the warranty period include areas of extreme traffic, extreme UV exposure, and extreme chemical exposure. Extreme traffic defined by areas with annual traffic of 250,000 users or greater. Extreme UV exposure defined by more than 90 days of daytime in the "extreme" category as defined by the World Health Organization UV index within a 365 day period. Extreme chemical exposure defined as water chemistry used on the product with more than 28 days cumulative time in a 365 day period outside of the "ideal" set in APSP Water Quality Standards. Life Floor® warrants all Products in areas of extreme traffic, extreme UV exposure, and extreme chemical exposure for a term of two (2) years from the date of delivery of the Products if installed by a Certified or Preferred Installation Partner and one (1) year from the date of delivery of the Products otherwise.

Life Floor® does not warranty any purchases if the Customer knowingly purchases factory second (defective) quality material. Life Floor® does not warranty installation services. The Customer shall notify Life Floor® in writing within thirty (30) days of the discovery of a defect causing the Products to be noncompliant with this express warranty. Any such notice must be received during the Warranty Period in order to be valid.

If Life Floor®, after testing or an on-site audit, determines that there is a defect causing the Products to be noncompliant with this express warranty during the Warranty Period, Life Floor®'s sole responsibility under this express warranty shall be either to repair or replace, at Life Floor®'s option and expense, any such defective Product. Installations performed with Preferred Installation Partner are qualified to receive installation services from the Preferred Installation Partner in addition to replacement product at no cost to the customer. If fault is found in the workmanship or adhesion of the Preferred Installation Partner, Life Floor®'s responsibility under this partnership is to replace Product at no cost to the customer. Life Floor®'s express warranty herein set forth is expressly conditioned upon the proper maintenance, care, and use of the Products. Improper maintenance, care, and/or use of the Products will invalidate the warranty including failure to follow the Life Floor® Recommended Cleaning Process. See Life Floor® owner's manual for further limitations on use.



PART 2: PRODUCTS

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as “or equal” or “or approved equal” or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining “or equal” products.

2.01 EVA-rubber Copolymer Wet Area Surfacing System

Specifier Note: Retain or delete paragraph below per project requirements and specifier’s practice.

A. Proprietary Products/Systems. EVA-rubber copolymer tile wet area surfacing system, including the following:

1. Life Floor®:

a. Material: Life Floor® is a factory-molded surface composed of EVAtrax™, an ethyl vinyl acetate copolymer. Specifier Note: The type of attraction determines the required tile thickness. Depending on ASTM F1292 requirements for critical fall height 6’ select tile thickness from optional thicknesses 1 ¼”. Specify project requirements below and coordinate with working drawings.

b. Thickness and Weight: 3/8” standard: 2lb or 0.9kg; 7/8”: 4.4lbs or 2kg

c. Color:

i. Life Floor® Patterns: [Slate] [Ripple 2.0]

ii. Life Floor® Colors: [Sepia] [Terra Cotta] [Tiki] [Mojave] [Sandstone] [Gobi] [Sandbar] [Ivory] [Porcelain] [Ocean] [Bluebird] [Aviator] [Iris] [Onyx] [Boulevard] [River Rock] [Kestrel] [Iceberg] [Heron] [Foghorn] [Evergreen] [Olive] [Limelight] [Lilypad] [Turquoise] [Platypus] [Sunshine] [Goldfish] [Pomegranate] [Aqua] [Seafoam] [Submariner]

Specifier Note: Edit Article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 1 Project Requirements (Product Substitutions Procedures) Section.

2.02 Product Substitutions

A. Substitutions: No substitutions permitted.

Specifier Note: Specify subordinate or secondary items that aid and assist primary products specified above or are necessary for preparation or installation of those items.



PART 3: EXECUTION

Specifier Note: Revise article below to suit project requirements and specifier's practice.

3.01 Manufacturer's Instructions

A. Comply with the instructions and recommendations of the manufacturer.

Specifier Note: Specify actions to physically determine that conditions are acceptable to receive primary products of the section.

3.02 Examination

A. Site Verification of Conditions: Verify that substrate conditions are suitable for installation of the EVA-rubber copolymer wet area surfacing system.

B. Do not proceed with installation until unsuitable conditions are corrected.

C. Proper drainage is critical to the longevity of the Life Floor® surfacing system. Inadequate drainage will cause premature breakdown of the system in affected areas; and void the warranty.

D. Variance. EVA-rubber copolymer wet are surfacing system tiles have an acceptable variance. Acceptable variance for thickness in tiles is plus or minus .020" (0.5 mm.) Acceptable variance in length is plus or minus 0.0625" (1.6 mm). If tiles are found to be outside variance contact manufacturer directly.

Specifier Note: Specify actions required to physically prepare the surface, area or site or to incorporate the primary products of the section.

3.03 Preparation

A. Surface Preparation: Ensure that the concrete, metal, wood, tile, or fiberglass substrate is level or uniformly sloped since surface variations will be telegraphed through to the rubber tile surface.

1. Concrete must conform to ACI 302 standards, be dry, fully cured (28 days), a minimum density of 100 lbs per ft³ as well as having a compressive strength greater than 3000 psi for residential installations and 4350 psi for commercial installations.

2. The substrate must be dry, structurally sound, and dimensionally stable. It should be free of any substance or condition that may reduce or prevent the adhesive bond to substrate. This includes, but is not limited to, concrete sealers, curing agents, dirt, wax, tar, paint, and loose toppings. If the surface contains these substances they must be mechanically removed. The use of solvents (with the exception of acetone), adhesive remover or acid etching is not recommended.

3. If waterproofing is needed for an application, then it should be specified and addressed prior to the Life Floor application. Life Floor tiles should only be bonded to approved surfaces (please refer to appropriate adhesive guideline).



4. Measure pH of any concrete slab before installing Life Floor. The pH of the slab must be within the suggested range of the adhesive (contact adhesive manufacturer for exact range). If the pH is not within the suggested range, do not install until it fits adhesive manufacturer's requirements. Failure to do so can result in a permanent bond.

Specifier Note: A high alkali slab (with a 10 to 14 pH) can signify a moisture problem. If a pH problem is found, the slab should be tested for moisture and remedied according to adhesive specifications.

5. Concrete porosity should be noted. It is always a good practice to perform bond tests before large scale installations. Excessively absorbent (porous) or rough concrete surfaces can cause an increase in adhesive usage. Surface grinding can be used to smooth an excessively porous or rough surface.

6. Concrete surface prep: Remove protrusions, bumps and ridges by grinding or chipping. Repair, fill & level cracks, holes, depressions, rough or chipped areas of substrate.

7. For new slabs a steel troweled finish should be specified and is required. Where a troweled finish is specified, finish the surface first with power floats, where applicable; then with power trowels and finally with hand trowels. The first troweling after power floating shall be done by a power trowel and shall produce a smooth surface which is relatively free from defects, but which may still contain some trowel marks. Additional troweling shall be done when a ringing sound is produced as the trowel is moved over the surface. The surface shall be thoroughly consolidated by the hand troweling operations. The finished surface shall be free from any trowel marks, uniform in texture and appearance, and shall be placed to the required tolerance. (See Tolerances below)

Specifier Note: Damage due to burnishing will not be accepted. On surfaces intended to support floor coverings or membranes, any defects of sufficient magnitude to show through the floor coverings shall be removed by grinding.

8. Substrate should be sloped properly towards drains to allow for proper drainage. Refer to the Model Aquatic Health Code (MAHC) for sloping requirements for your application and facility.

9. If planning on recessing slabs to accommodate for the 3/8" tile depth, then you should aim for 1/4" max recess. This will help to avoid raised drains/floor jets that require "in-field" adjustments by installation teams. On-site teams can grind concrete down around the fixture to balance out height if needed, but raising the level of the concrete can incur additional costs.

Tolerances

Planeness: When a straightedge 3m or 9.84ft (to the nearest foot) long is placed on the surface at any position, no part of the surface shall be more than 3mm or 1/8in below the straightedge.

Smoothness: When a straightedge 150mm or 6in long is placed on the surface at any position, no part of the surface shall be more than 1mm or 1/32in below the straightedge.

Specifier Note: To determine if you are within defined tolerances one must place a straight edge anywhere onto the surface in any direction. Coordinate article below with manufacturer's recommended installation requirements.

3.04 Installation



A. Contact manufacturer for installation.

NSF International

789 N. Dixboro Road, Ann Arbor, MI 48105 USA

RECOGNIZES

Lifefloor

Minneapolis, MN

AS COMPLYING WITH NSF/ANSI 50 AND ALL APPLICABLE REQUIREMENTS.
PRODUCTS APPEARING IN THE NSF OFFICIAL LISTING ARE
AUTHORIZED TO BEAR THE NSF MARK.



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This certificate is the property of NSF International and must be returned upon request. This certificate remains valid as long as this client has products in NSF's Official Listings for the referenced standards. For the most current and complete Listing information, please access NSF's website (www.nsf.org).

A handwritten signature in black ink, appearing to read "Theresa Bellish".

May 30, 2019
Certificate# C0367337 - 01

Theresa Bellish
General Manager, Water Systems