Sports Floor Specifications

ReFlex Tile™

Action® FLOOR SYSTEMS LLC

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REFLEX, EZ-Lock, and REFLEX ULTRA MAX RUBBER FLOORING SPECIFICATION

Part 1 - General

1.01Description

A. Recycled rubber resilient athletic flooring tiles suitable for multi-use activities including weight rooms, spinning areas, equipment areas, and other multi-use areas. Available in all black, standard 10 to 20 percentage color fleck with higher percentages up to 95% available.

1.01Quality Assurance

A. All system component parts must be supplied by Action Floor Systems, LLC of Mercer WI.
B. The flooring contractor must be approved by Action Floor Systems, LLC of Mercer WI.
C. 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.

1.02 Working Conditions

A. Synthetic materials specified herein shall not be installed until all masonry, painting, plaster, tile, marble and terrazzo work is completed, and overhead mechanical trades, and painters have finished in the synthetic floor area. The building must be reasonably dry; all openings must be closed in; permanent heating and air conditioning installed and working before, during, and after installation.
B. The general contractor / owner shall provide an area where the stored materials can be maintained at a minimum of 65 degrees and under 80% relative humidity. Ideal installation and storage conditions are the same as those that will prevail when the building is occupied.
C. Others will provide a concrete sub floor to the flooring contractor finished, steel toweled, and level to 1/8” in any ten-foot radius. High spots shall be ground level and low spots filled with an approved leveling compound. No concrete curing or hardening agents shall be applied to the concrete sub floor. The concrete shall be clean, flat, dry, and free from dirt, dust, oil, grease, paint, alkali, and concrete curing agents, hardening and parting compounds, old adhesive residue, or other foreign materials.
D. Flooring installation shall not begin until all sub-contract work that would cause damage, dirt, dust, or interruption of normal installation. The installation area shall be closed to all traffic and activity for a period to be set by the flooring contractor.
E. ENVIROMENTAL 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 and post consumer recycled content resilient base mat.
4. Accredited "ecospecifier" product for achievement of Green Building Rating Tool Credits.

F. Protect the work during and after the installation process, until acceptance by the owner or agents.

1.04 Warranty

A. Action Floor Systems, LLC warrants the material it ships to be free from defects in materials and workmanship for a period of one (1) year, and the flooring contractor warrants the installation of the flooring to be free from defects in materials and workmanship for a period of one (1) year. The exclusive remedy under this warranty shall be replacement of defective material by Action Floor Systems, LLC or correction of defective installation by the flooring contractor. All implied warranties of merchantability or fitness for intended use are limited to the period of 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 precautions to provide adequate ventilation during hot, humid weather. This warranty also excludes damage to floors due to ordinary wear and tear, faulty construction of the building (other then the flooring contractor), separation of the concrete slab underlying the floor, settlement of the walls, or use of unapproved cleaners or sealers on the floor.

Part 2 – Products

2.01Materials

A. Reflex and Reflex Ultra Max floor systems, recycled rubber with EPDM granules.
B. Square Edge Tiles, Interlocking Tiles (EZ_Lock), and dowel rod interlocking tiles
    a. Size: 36" x 36"(EZ-Lock only) and 24" x 24" (EZ-Lock and Ultra Max)
    b. Thickness: 3/8" EZ_Lock (option 1/4" or 1/2") for reflex and 1" Ultra Max
C. Other Attributes
    a. Standard: 10% EPDM color
    b. Available in solid black and in standard EPDM color fleck densities of 10% or 20%; colors; red, blue, green, gray, tan, eggshell, yellow, purple, orange, or teal fleck on a black base.
    c. Option: Color mixes with color densities up to 95% available with minimum incremental purchase (i.e. red, white, and blue at 50% color density.
D. Performance Data Reflex

Test	Test Method	Result Value
Durometer, Shore A	ASTM D2240-97	60
Density, Lbs/ft sq.	ASTM D297-93 P-A, 16.3	64
Compressibility @ 100 psi %	ASTM F36-95	12

Flexibility	ASTM F137-71 (1994)	F=1
Tensile, psi	ASTM D412-98a, die C @ 20 ipm	
With Grain		600
Against Grain		450
Tear, ppi	ASTM D624-98 @20 ipm	
With Grain		150
Against Grain		120
Compression Set, % 22 hrs at 158 F	ASTM D395-98, Method B	
25% Deflection		40%
50% Deflection		30%
Coefficient of Friction	ASTM D1894-95	
Dry		1.33
Wet		1.56
Flammability & Flame Spread	DOC FFI-70 CSPC	Pass
Resistance to Chemical Attack	ASTM F925-97	
Ammonia	No Surface Attach or Color Change	
Bleach	No Surface Attach or Color Change	
Disinfectant	No Surface Attach or Color Change	
Alcohol	No Surface Attach or Color Change	
Tide	No Surface Attach or Color Change	
5% NaOH Solution	No Surface Attach or Color Change	
Sweat	No Surface Attach or Color Change	
Static Load Limit, Residual Compression	ASTM F970-98	.0016”
Rubber in Compression, 500 lb Load	ASTM D575-91 500 lb Load	43
Compression Endurance Set	10,000 fatigue cycles at 50% Displacement	5%

E. Performance Data Reflex Ultra Max

Density ASTM D3676 (top layer)	65 pcf – 80 pcf (color contingent)
Hardness ASTM D2240 (Shore A)	65 +-5
Tear Strength ASTM D624	70 pli
Elongation ASTM D412	>150%
Tensile Strength ASTM D412	>200 psi
Resistance to Chemicals ASTM F925	No Change
Coefficient of Friction ASTM D2047	>.95
Impact Insulation Class (IIC) E492	>50
ASTM E648 Critical Radiant Flux	class II
LEED Points	6 possible credits

Part 3 - Execution

3.01 Inspection

A. Suitable substrates include but are not limited to permanently dried concrete and wood.
B. To eliminate the telegraphing effect of defects in the substrate through the flooring, the substrate must be smooth.
C. Remove all dust, dirt, grease, and foreign materials from the substrate.

D. Moisture in the substrate negatively affects any adhesive product and should be eliminated prior to installation. Recommend calcium chloride test method with a vapor transmission rate of 3.0 lbs or less per 1,000 sq ft.
E. Inspect concrete slab of proper tolerance and dryness, reporting in writing any discrepancies to the general contractor.
F. All work required to put the concrete slab in acceptable condition shall be the responsibility of the general contractor.
G. The slab shall be broom cleaned by the general contractor.

3.01 – Installation Tiles

A. Inspect flooring prior to installation for manufacturing defects, correct color, and size.
B. Make the assumption right now that the walls in the room are not square or straight.
C. Square the room or area of installation.
D. Mark the floor into quarters.

E Full glue down installations are recommended for maximum wear and durability but not necessary for Ultra Max tiles. For Ultra Max tiles use dowel rod connecters to interlock tiles.
F. Unroll/unpack the flooring and allow equilibrating with the installation environment for a period of 12 hours or more prior to final installation. This will allow the flooring time to relax as it is stretched somewhat during manufacturing.
G. Thoroughly mix 2-part polyurethane adhesives if applicable. Apply adhesive directly to the sub-straight with a notched trowel per manufacturer's instructions.
H. Only apply as much adhesive as can be covered per environmental conditions and pot time per manufacturer's instructions.
I. Place the tile firmly into the adhesive and butt to the adjacent tile. Lay the tiles in a straight tile pattern or broken joint pattern as directed by the architect. In order to minimize trapped air LAY, do not drop the flooring into the adhesive.
J. Roll completed areas of the floor immediately with 100 lb roller to maximize contact of adhesive with the floor, working from the middle of the area out.
K. When the floor is complete, roll the area again.
L. Wipe any excess adhesive that oozes between the joints with the manufacturer's recommended solvent. Mineral spirits will clean up most adhesives adequately.
M. Allow the adhesive to cure per the adhesive manufacturer's recommendation prior to excess foot traffic and rolling loads across the flooring. Premature traffic could cause gaps to form in the seams.

3.03– Clean-up

A. Remove all debris from the work area and dispose of empty cartons and containers in accordance to all local, state, and federal requirements.

3.04 - Maintenance

A. New floor initial maintenance.
    1. IMPORTANT Allow new floor or newly recoated floor to cure at least 96 hours.
    2. Sweep floor thoroughly. Do not use sweeping compounds.

3. Mix Action Floor Systems, LLC approved cleaner with clean water to achieve desired water-to-cleaner ratio.
4. Using a new mop, damp mop the entire floor with cleaner/water mix.
5. Allow solution to dry on floor prior to use.

B. Upon completion of floor installation, the owners, attendants or individuals in charge and responsible for the upkeep of the building are to see that all care maintenance are followed in accordance with Action Floor Systems, LLC guidelines. Failure to follow care and maintenance guidelines may void warranty.

IT IS THE POLICY OF ACTION FLOOR SYSTEMS, LLC. TO CONTINUALLY UPDATE AND IMPROVE OUR PRODUCT LINES. THEREFORE, WE RESERVE THE RIGHT TO CHANGE, MODIFY OR DISCONTINUE SYSTEMS, SPECIFICATIONS AND ACCESSORIES OF ALL PRODUCTS AT ANY TIME WITHOUT ANY NOTICE OR OBLIGATION TO ANY PURCHASERS.

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