



# TRACTION

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**TRUSPORT™**  
MULTIPURPOSE ATHLETIC SURFACE

## SECTION 09 65 66 Resilient Athletic Flooring

### **PART 1: GENERAL**

#### 1.0 SUMMARY

##### 1.0.1 Work Included

- A. Prefabricated Rubber Sports Flooring
- B. Adhesive and accessories required for installation and maintenance

##### 1.0.2 Related Sections

- A. Section 02050: Basic Site Materials and Methods
- B. Section 02065: Cement and Concrete (includes bituminous material and bituminous concrete)
- C. Section 02700: Bases, Ballasts, Pavements and Appurtenances

#### 1.1 REFERENCES

##### 1.1.1 American Society for Testing & Materials (ASTM)

- A. ASTM D 2047: Standard Test Method for Static Coefficient of Friction of Floor Surfaces
- B. ASTM D 2240: Standard Test Method for Rubber Property—Durometer Hardness
- C. ASTM D 5116: Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials/Products
- D. ASTM E 648: Standard Test Method for Critical Radial Flux of Floor-Covering Systems Using a Radiant Heat Energy Source
- E. ASTM E 662: Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials
- F. ASTM F 970: Standard Test Method for Static Load Limit
- G. ASTM F 1869: Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Sub-floor Using Anhydrous Calcium Chloride
- H. ASTM G21: Standard Practice for Determining Resistance of Synthetic Polymeric Materials to FUNGI

#### 1.2 SYSTEM DESCRIPTION

- A. Provide a prefabricated athletic rubber flooring, dual durometer, vulcanized and calandered with a special texture.
- B. Provide an athletic rubber sheet, which has been manufactured to maintain performance criteria stated by manufacturer without defects, damage or failure.
- C. ITF Classification: Category 5- FAST

#### 1.3 SUBMITTALS

- A. Product data, including manufacturer's information for specified products
- B. Adhesive and line paint product data.
- C. Samples for colors and textures



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- D. Shop drawing showing seam layout, profiles and product components
- E. Installation and maintenance instructions.

## 1.4 QUALITY ASSURANCE

- A. The manufacturer must have a minimum of five (5) years experience in the manufacturing of prefabricated rubber surface.
- B. Installer must have performed installations of the same scale in the last three years.
- C. Installer to be recognized and approved by the athletic rubber flooring manufacturer.
- D. Certified ISO 9001 & ISO 14001
- E. ITF Certified

## 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Materials must be delivered in manufacturer' s original, unopened and undamaged containers with identification labels intact.
- B. Store material up-right, protected from exposure to harmful weather conditions, on a clean, dry, flat surface protected from all possible damage.
- C. Recommended environmental condition for storage is a minimum of 55° F (13° C).
- D. Material need not suffer excessive damage during handling (i.e. edge chipping, excessive warping, etc).

## 1.6 SITE CONDITIONS

- A. Maintain a stable room and sub floor temperature for a period of 48 hours prior, during and 48 hours after installation. Recommended range: 65°F to 80°F (18°C to 27°C).
- B. Installation to be carried-out no sooner than the specified curing time of concrete sub floor (normal density concrete during time is approximately 30 days for development of design strength).
- C. Substrate Flatness (concrete or asphalt) must not vary more than 1/8" in 10' radius.
- D. Moisture vapor emission content of the concrete slab must not exceed 5lbs/1000ft<sup>2</sup> per 24 hrs when using the Calcium Chloride test as per ASTM F 1869.
- E. Installation of athletic flooring will not commence unless all other finishes in the building have been completed.

## 1.7 WARRANTY

- A. Provide manufacturer's standard warranty
- B. The athletic rubber flooring is warranted to be free from manufacturing defects for a period of five (5) years from the date of shipment from the manufacturer.

## 1.8 MAINTENANCE AND REPAIR

- A. Provide "attic stock" of each type and color.
- B. Repair material must be from the same dye lot as material supplied for initial installation.
- C. Maintain surface as per manufacturer's instructions.



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## **PART 2: PRODUCT**

### 2.1 MANUFACTURER

- A. Basis for design: TruSport by TRACTION, 1830 Howard Street, Suite F , Elk Grove Village, IL 60007
- B. 800-283-9522

### 2.2 TruSport

#### 2.2.1 Description

- A. Prefabricated athletic rubber flooring, calandered and vulcanized with a particular closed cell structure, based on special isoprenic rubbers, mineral fillers, vulcanizing and stabilizing agents and color pigments, highly resistant to UV rays and atmospheric agents, with system of differentiated elasticity between top surface and base.
- B. Thickness: Specify 6, 8, 10, 12, 13 or 14mm.
- C. Color: provided in standard & custom colors.
- D. Finish: Multi-purpose embossing.
- E. Manufactured in two layers, which are vulcanized together. The shore hardness of the top layer will be greater than that of the bottom layer, shore hardness of layers to be recommended by the manufacturer and the limits specified.
- F. Top color layer of material must be free of recycled rubber granules or different color fillers.

#### 2.2.2 Physical Properties

- A. Physical properties of the prefabricated athletic rubber floor, to conform to the following requirements:

Physical Properties	Standard	Specification
Hardness Shore A	ASTM D 2240	55/40 (±5)
Compression Set	ASTM D395	90
Resilience by Vertical Rebound	IASTM D2632	68
Tensile Properties: Strength	ASTM D 412-98	≥ 1.25 Mpa
Elongation at break	ASTM D 412-98	≥ 200%
Coefficient to Friction	ASTM D 1894	>0.6 wet
Resistance to Fungi	ASTM G 21	Non-growth
Spike resistance		Light Traffic Only
Critical Radiant Flux	ASTM E 648	0.59 W/cm <sup>2</sup> (Class 1)
Optical Density of Smoke	ASTM E 662	<450, Class I
Color Stability		Good
Chemical Resistance		Good
UV Resistance		Good



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V.O.C. Compliance	ASTM D5116	YES
Static Load Limit	ASTM F960	0.003 in.
Light Reflection		Average
ITF Classification (tennis)		CATEGORY 5- FAST

## 2.3 MATERIAL

- A. Provide TruSport, a prefabricated athletic rubber surface, in rolls.
- B. Provide T-111, a two-part polyurethane adhesive approved/recommended by the manufacturer or distributor.
- C. Patching compound and line marking paint, to be supplied or approved/recommended by rubber sport flooring manufacturer or distributor.

## **PART 3: EXECUTION**

### 3.1 EXAMINATION AND PREPARATION

The following must be ensured prior to installation of the primary product:

- A. Concrete or Asphalt sub floors to be placed a minimum of thirty (30) days prior to the installation of athletic rubber floor.
- B. No concrete or asphalt sealers or curing compounds are applied or mixed with the sub floors (refer to Section 03050 of Division 3 and/or Section 02065 of Division 2).
- C. The underlayment is adequate (if installing over wood sub floors). APA Exterior Underlayment Grade Plywood is recommended.
- D. Water vapor membrane complies with specification in ASTM E 1745.
- E. Alkalinity test and moisture test must be performed. PH level should be in the range of 7 to 8.5. Moisture content must not exceed 5lbs/1000ft<sup>2</sup> per 24 hrs (verify using the calcium chloride test as per ASTM F 1869).
- F. Smooth, dense finish, highly compacted with a tolerance of 1/8" in the 10ft radius (3mm in 3.05m radius). Floor flatness and floor levelness (FF and FL) numbers are not recognized.
- G. Concrete or asphalt sub floors on/or below-grade are installed over a suitable moisture retardant membrane as per ASTM E 1643 and E 1745.
- H. Sub floors must be clean, free of paint, dust, sealer, hardeners, grease, oil, solvents, or adhesive and any other foreign substances that may act as a bond barrier.
- I. Sealing of cracks, holes and, smoothing and leveling of rough, uneven surfaces, must be carried out using a good quality Portland cement based leveling compound (feathering compound), approved by the manufacturer.
- J. Installation will not be carried out unless above conditions are satisfied.
- K. Report any discrepancies to the General Contractor or Owner for correction.



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## 3.2 INSTALLATION

- A. The surrounding area of the mixing of the adhesive should be covered with plastic, Kraft paper, or other material to protect the area.
- B. Mix and apply adhesive according to manufacturer's recommendations.
- C. When beginning the first row the adhesive should be applied evenly up to 2" (5cm) from both edges of the long seams and up to 12" (30cm) from the end seam.
- D. Complete an entire row before attempting to start the next row
- E. To start the second row, apply the adhesive underneath the long seam the same as above for the previous row as well as for the next row. (2" (5cm))
- F. Make sure that there is a good transfer of the adhesive when unrolling the material in the wet adhesive.
- G. Remove all excess adhesive that may ooze through the seams or any drops that may have dripped onto the surface. This can be done by rubbing with denatured rubbing alcohol. Do this before it dries.
- H. Use 2" (5cm) masking tape to help to close gaps in the seams and keep them in place while the adhesive sets. NEVER use duct tape; it will chemically react with the flooring surface.
- I. Cover every seam with weight such as bricks. These seams need to be covered for at least 12 hours and will prevent them from peaking. Double stack the bricks if necessary depending on the tension and thickness of the material.
- J. To eliminate any trapped air, use a lightweight roller 120 lb (55kg) and always roll this at a 45° angle.
- K. Be cautious when adjusting the end seams to not apply too much pressure while ensuring them to be perfectly sealed. If a seam becomes pressured, this too will cause peaking.