

## VSPORT 550 SPORT SURFACE

Distributed exclusively in CANADA by CALIBER SPORT SYSTEMS  
Inc. (Ontario & Western Canada)

[www.calibersport.com](http://www.calibersport.com)

Distributed exclusively in CANADA by MULTI-SPORT SURFACE Inc.  
(Quebec & The Maritimes)

[www.msssport.com](http://www.msssport.com)

### SPECIFICATIONS AND INSTALLATION METHODS:

*Contact your regional distributor/contractor for more information or more detailed specifications or the following installation techniques outlined in this specification:*

***“LESS” GLUE INSTALLTION METHOD FOR MINIMUM ENVIRONMENTAL IMPACT  
HIGH MOISTURE INSTALLTION METHOD WITH MOISTUREGARD BARRIER MEMBRANE***

## SECTION 096566 - RESILIENT ATHLETIC FLOORING

### PART 1 - GENERAL

#### **SUMMARY**

Section Includes: Supply and installation of indoor sheet vinyl resilient athletic flooring and application of painted game lines.

#### **SUBMITTALS**

Product Data: Manufacturer's promotional brochures, specifications and installation instructions, for each type of product indicated.

Samples: Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all the available colours, textures and styles.

Samples: Submit colour samples of all the available game line paint colours for selection and approval.

#### **CLOSEOUT SUBMITTALS**

Submit three (3) copies of the Manufacturer's maintenance instructions.

Submit three (3) copies of the material and installation warranties as specified.

#### **QUALITY ASSURANCE**

At least ten years active experience in the manufacture and marketing of indoor resilient athletic flooring.

A provider of authorized installer training.

At least five years experience in the installation of resilient athletic flooring.

Experience on at least five projects of similar size, type and complexity as this project.

Employer of workers for this Project who are competent in techniques required by manufacturer for resilient athletic flooring installation indicated.

Fire Test Characteristics: As determined by testing identical products according to ASTM E648, Class 1 by a quality testing agency acceptable to authorities having jurisdiction.

Athletic Performance: Comply with ASTM F2772 Class 2 for force reduction, ball bounce, vertical deformation and friction.

#### **DELIVERY, STORAGE, AND HANDLING**

Store flooring and installation materials in protected dry spaces, with ambient temperatures maintained within range recommended by manufacturer, but not less than 55 deg F (13 deg C) nor more than 85 deg F (29 deg C).

Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to Project.

## **FIELD CONDITIONS**

Product Installation:

Maintain temperatures during installation within range recommended by manufacturer, but not less than 65 deg F (18 deg C) in spaces to receive flooring for 72 hours prior, during and 72 hours after the installation.

After installation, maintain temperatures within range recommended by manufacturer, but not less than 55 deg F (13 deg C) or more than 85 deg F (29 deg C).

Prohibit traffic during flooring installation and for at least 72 hours after flooring installation. Ensure proper protection is in place if other trades are using space after completion.

Install flooring only after other finishing work, including painting and overhead work, has been completed.

## **WARRANTY**

Special Limited Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring that fails within specified warranty period.

Failures include, but are not limited to, the following:

- Manufacturing defects.
- Surface wear to the point of wear-through.
- Failure due to substrate moisture exposure not exceeding 94 percent relative humidity when tested according to ASTM F2170 or 8.5 pounds moisture vapour emission rate when tested according to ASTM F1869.

Warranty Period:

For material defects and surface wear-through: 15 years from date of Substantial Completion.

For moisture vapour tolerance: 1 year from date of Substantial Completion.

For installation, installer will make any repairs or replace as determined by owner for any failure due to poor or faulty installation, for a period of 2 years from date of Substantial Completion.

## **COORDINATION**

Coordinate layout and installation of flooring with other gymnasium equipment.

## **PART 2 - PRODUCTS**

### **SHEET VINYL ATHLETIC FLOORING**

Basis-of-Design Manufacture: Subject to compliance with requirements, provide V-Sport 550 athletic surfacing, installed with recommended installation method (Full spread, Less Glue, No Glue or Moisturegard).

**OPTIONAL** “Moisturegard” Membrane where isolation from unstable or slabs with high moisture-vapour-emission deem necessary. Please note if required, and allow for additional expense (material and labour).

Substitution Limitations: Upon approval of owner or consultant where product meets expectations for quality, performance, durability and aesthetic.

Product Description: Single-durometer foam-backed sheet vinyl flooring designed for fully adhered flooring applications.

Overall Thickness: Not less than 5.50 mm.

Wear-Layer Thickness: Not less than 2.15 mm.

Backing: high density, single layer, single-durometer, closed cell foam with reinforced fiberglass grid AND secondary non-woven fiberglass interlayer (secondary fiberglass grid standard only on 550 range, optional on other products)

Seaming Method: Heat welded.

Installation Method:

Traditional FULL SPEAD METHOD, or,

“Less” glue, “No Glue” or “Moisturegard” (requiring extra Barrier Membrane) installation method as described in manufacturers certified installer handbook & training.

Flooring to be properly cut and fit, to ensure all gaps and seams are within recommended tolerances for welding & aesthetics.

Surfaces, including solids and wood designs must be hammered or pebbled texture for a consistent appearance and ideal maintenance characteristics.

Surface to be treated with factory applied permanent Anti-Bacterial/Fungicidal Treatment throughout the flooring material, to protect flooring, and eliminate potential air quality hazards resulting from growth of moulds or fungi.

PUR coating: Manufacturer's, factory-applied, permanent and UV-cured

**Roll Size:**

Roll Width & Length: Wood visuals to be 1.5m x 26.4m long for typical basketball installation with minimal or no cross seams.

**Performance Criteria:**

ASTM F 2772-11 Indoor Sport Floor Standard:

Where required by owner, provide certification of compliance for the four ASTM F2772 Indoor Sport Floor Standard performance categories:

Shock Absorption/Force Reduction:

Class C2 (22% to 33%). **Pass**

Ball Bounce:

Minimum 90%: **Pass**

Surface effect/Coefficient of Friction:

Between 80-110: **Pass**

Vertical deformation:

Maximum 3.5mm: **Pass**

Static Load Limit/Residual Indentation:

ASTM F1303; **Pass** Static Load Resistance requirement of less than 0.005 inch of residual indentation as tested per ASTM F 970 at prescribed test load of 175 p.s.i.

EN 1516; Pass, Less than or equal to 0.5 mm.

Resistance to Rolling Load: EN 1569; **Pass.**

Chemical Resistance: ASTM D 543; **OK.**

Impact Resistance: EN 1517; **Pass.**

Abrasion Resistance: EN ISO 5470; **Pass.**

Sound Insulation: EN ISO 717; 18 dB.

Gloss/Brightness: EN ISO 2813; **Pass.**

Organic Emission: ASTM D 5116; **Pass**

Fire Performance: ASTM E 648; Greater than 0.45 W/cm<sup>2</sup>, **Class 1.**

Surface Maintenance Requirements: No-wax surface requiring only cleaning and rinsing.

Slab Moisture Design Tolerance:

Maximum relative humidity of 94 percent when tested according to ASTM F 2170.

Maximum moisture vapour emission rate of 8.5 pounds of water per 1000 sq. ft. in 24 hours when tested according to ASTM F1869.

## **ACCESSORIES**

Trowelable Leveling and Patching Compound: cement-based formulation approved by athletic flooring manufacturer.

Adhesives: As recommended by athletic flooring manufacturer for substrate and conditions indicated.

Heat Welding Rod: Colour matched, as supplied by indoor resilient athletic flooring manufacturer.

Game-Line and Marker Paint: 2 component waterborne formulation, as recommended & supplied by flooring manufacturers.

## PART 3 - EXECUTION

### EXAMINATION

Verify the Following:

The area in which the indoor resilient athletic flooring will be installed is dry, weather-tight and in compliance with specified requirements.

Permanent heat, lighting and ventilation systems are installed and operable.

Other work, including overhead work, that could cause damage, dirt, dust or otherwise interrupt installation has been completed or suspended.

No foreign materials or objects are present on the substrate and that it is clean and ready for preparation and installation.

Tests to verify that the moisture evaporation rate or substrate relative humidity is within the specified ranges.

The concrete slab surface pH level is within the specified range.

The concrete slab surface deviation is no greater than 3/16 inch within 10 feet (3.2 mm within 3 m) when measured according to ASTM E 1155.

The concrete slab complies with ACI 302.2R for concrete design including use of a low-permeance vapour barrier directly beneath the concrete subfloor with sealed penetrations.

### PREPARATION

Prepare substrates according to manufacturer's written recommendations to ensure proper adhesion of resilient athletic flooring system.

Concrete Substrates: Prepare according to ASTM F 710.

Verify that substrates are dry and free of sealers, curing compounds and other additives. Remove coatings and other substances that are incompatible with adhesives using mechanical methods recommended by manufacturer.

Alkalinity Testing: Perform pH testing according to ASTM F 710. Proceed with installation only if pH readings are between 7.0 and 8.5.

Moisture Testing: Perform ASTM F 2170 relative humidity test and proceed with installation only after substrates have maximum relative humidity of 90 percent. Or perform ASTM F 1869 calcium chloride test and proceed with installation only after substrates have maximum moisture-vapour-emission rate of 8 lb of water/1000 sq. ft. in 24 hours. **FOR SLABS WHERE VAPOR EMISSION RATES EXCEED ABOVE RATES (TO MAXIMUM 9lbs/1000sft or 90% RH) PLEASE USE MOISTUREGARD INSTALL METHOD AS OUTLINED BELOW.**

Use trowelable concrete based leveling and patching compound with the same moisture vapor tolerance as the adhesive to fill depressions, holes, cracks, grooves or other irregularities in substrate.

Place flooring and installation materials into spaces where they will be installed at least 72 hours before installation. Install flooring materials only after they have reached the same temperature

as space where they are to be installed.

Sand the surface of the concrete slab.

Sweep and then vacuum substrates immediately before installation. After cleaning, examine substrate for moisture, alkaline salts, grit, dust or other contamination. Proceed with installation only after unsatisfactory conditions have been corrected.

## **SHEET ATHLETIC FLOORING INSTALLATION**

General:

Comply with manufacturer's installation instructions.

Fit flooring neatly and tightly to vertical surfaces, equipment anchors, floor outlets, and other interruptions of floor surface.

Extend flooring into toe spaces, door reveals, closets, and similar openings unless otherwise indicated.

Lay out flooring as follows:

Minimize number of seams and place them inconspicuous areas.

Traditional full spread method – Roll back laid out flooring sheets, spread glue to entire substrate, using manufacturer recommended adhesive, trowel and techniques to ensure proper adhesion and minimizing of air bubbles. Roll flooring using 100” sheet roller, clean glue from surface and ensure no lifting, air etc in finished product. Allow flooring to set in adhesive overnight before welding.

“Less” Glue Method – place adhesive as required and directed by manufacturer, at seams and perimeter, using manufacturer recommended adhesive at all times. This method will allow for complete removal and recycling of surface at end of life.

“No Glue” Method – place seam tape as required and directed by manufacturer, at seams and perimeter, using manufacturer recommended seam tape at all times. This method will allow for complete removal and recycling of surface at end of life.

Moisturegard install method (see product sheet for description and data): Over cleaned, prepped substrate, lay out rolls of Moisturegard, ensuring seams are tight to +/- 1/16”, not overlapping. Ensure layout keeps in mind minimum 8” stagger on long seams of top sheet flooring. Moisturegard sheet floats (no glue) on slab, place bead of premium polyurethane construction adhesive at door and cart storage openings. Leave 1/4” - 3/8” gap at walls and vertical obstructions. Use of 2 component pu adhesive between Moisturegard and VSPORT surface is recommended, but not mandatory. Where MOISTUREGARD is used, it is necessary to substitute vented wall base, or provide for venting at walls and vertical obstructions.

Vinyl Sheet Flooring Seams: Finish seams to produce surfaces flush with adjoining flooring surfaces. Rout joints and use heat welding rod to permanently and seamlessly fuse sections together. We recommend TURBO heat welding tools, including Turbo Caddy auto welder, sport groover and turbo plane for long seams. Other manufacturers equipment may be used, but please contact distributor if any questions on welding.

## **GAME LINES AND LOGOS**

Remove marks and blemishes from flooring surfaces, trace adhesives, scuffs, etc.

Sweep and then vacuum flooring.

Damp-mop or tack surface to remove dust and debris prior to application of line tape

Lay out game lines and logos to comply with rules and diagrams published by appropriate and recognized associations and local requirements.

Mask flooring at game lines and logos, and apply paint of color indicated to produce clean, sharp and distinct edges. Use compatible, manufacturer recommended paint and procedures at all times.

## **CLEANING AND PROTECTION**

Floor will be left clean and finished by installation contractor

Owner or contractor must assume responsibility for maintaining surface, allow no traffic for 72 hours after completion of line painting

If any overhead or heavy work, storage of heavy or dirty items on surface is required, floor must be adequately protected

**END OF SECTION**