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GAMECOURT PVC®
Vinyl Sheet with Foam Backing System Guide Specifications
Division 9 - Indoor Resilient Athletic Surfacing
Revised 01-02-10

PART 1 – GENERAL

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the GAMECOURT PVC® vinyl sheet with foam backing system.
 - B. Application of the game lines.
- 1.2 *SUBMITTALS*
- A. Product Data:
 - 1. Submit one (1) set of GAMECOURT PVC® “Vinyl Sheet with Foam Backing System Guide Specifications”.
 - 2. Submit one (1) chart of color options and game line paint color options.
 - B. Samples:
 - 1. Submit one (1) sample of specified system.
 - C. Closeout Submittals:
 - 1. Submit one (1) copy of the GAMECOURT PVC® maintenance instructions.
 - 2. Submit one (1) copy of the GAMECOURT PVC® material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
 - 1. The vinyl sheet with foam backing system shall be manufactured in an ISO 9001 certified plant.
 - 2. The vinyl sheet with foam backing system shall be manufactured in an ISO 14001 certified plant.
 - 3. The vinyl sheet with foam backing system supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer of the vinyl sheet with foam backing surfacing.
 - 4. The complete installation of the flooring system shall be carried out by an experienced & certified flooring contractor approved by the supplier and the work shall be performed in accordance with the supplier's installation instructions.
 - B. Certifications:
 - 1. Installer to submit certification attesting that they are an approved installer of the GAMECOURT PVC® vinyl sheet with foam backing system.
 - 2. GAMECOURT PVC® manufacturer to submit official ISO 9001 certification for the facility in which the vinyl sheet with foam backing system is manufactured.
 - 3. GAMECOURT PVC® manufacturer to submit official ISO 14001 certification for the facility in which the vinyl sheet with foam backing system is manufactured.
- 1.4 *DELIVERY, STORAGE AND HANDLING*
- A. Delivery:
 - 1. GAMECOURT PVC® shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Moose Sport's Surfaces, Ltd. recommendations.

- B. Storage:
 - 1. Store the material in a secure, clean and dry location maintaining a minimum of 55°F and under 50% relative humidity. Ideal installation and storage conditions are the same as those which prevail when building is occupied.

1.5 PROJECT / SITE CONDITIONS

- A. It is the responsibility of the general contractor/construction manager to maintain clean, secure, weather tight project site conditions acceptable for the installation of the GAMECOURT PVC®.
- B. Concrete sub floors on or below grade shall be adequately waterproofed beneath and at the perimeter walls and on earth side of below grade walls. It is the responsibility of the architect/engineer to determine the extent of this need.
- C. The general contractor shall furnish and install the concrete sub floors, depressing the slab sufficiently to accommodate the floor system. Slab depression shall be thickness of the vinyl sheet with foam backing.
- D. No concrete curing or hardening agents shall be applied to concrete sub floor.
- E. The slab shall be steel troweled and finished smooth to a tolerance of 1/8" in any 10' radius. This tolerance should be measured in accordance with ASTM E1155. The general contractor/construction manager should provide a certificate of compliance with the above recommendations. High spots shall be ground level, and low spots filled in with an approved leveling compound.
- F. Cracks, grooves, voids, cuts and joints may be filled with Ardex Portland-based patching/leveling compounds (or equal). Follow the manufacturer's limitations/recommendations. Moveable joints may have to be treated utilizing specific transitioning joint devices upon the architect's recommendations.
- G. Permanent heat, light and ventilation shall be installed and operating during and after installation.
- H. Do not install athletic flooring over new concrete until concrete has been cured and is dry. A minimum of 90 days is required. But, MOST often a new concrete slab will not meet the vapor emissions requirements listed below unless the slab has been installed and the area is sealed off to outside air for approximately 6 months or more.
- I. GAMECOURT PVC® 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 GAMECOURT PVC® floor areas. All sub-contract work which would cause damage, dirt, dust or interruption of normal installation pace will be completed. Suspension of other trades' work may be authorized providing their work will not interfere with the installation or damage the newly installed flooring.
- J. Installation will commence ONLY when the following criteria are met;
 - 1. The building shall be enclosed and weather tight.
 - 2. The temperature must be between 65-70°F., maximum humidity at 70% (50% is preferable), and HVAC must be installed and working two weeks prior to installation, during the installation and after installation.
 - 3. The installation area shall be closed to all traffic and activity for a period to be set by the flooring contractor.
 - 4. Sub floors shall be clean, dry, and free from dirt, dust, oil, grease, paint, alkali, concrete curing agents, hardening and parting compounds, old adhesive residue or other foreign materials.
 - 5. Vapor emission testing must be performed before the GAMECOURT PVC® material installation begins. The vapor emission levels/moisture content of the concrete slab should not be greater than 5 lbs. of vapor per 1000 square feet per 24 hours per ASTM F1869.
 - 6. Concrete subfloor surface pH level must be within the 7 to 8.5 range.
 - 7. The tolerance of the concrete slab is no more than 1/8" in any 10' radius. High spots shall be ground level, and low spots filled in with an approved leveling compound.

1.6 WARRANTY

- A. Moose Sports Surfaces, Ltd. (Moose) hereby warrants its GAMECOURT PVC® and welding rods to be made to manufacturer's specifications and to be free from defects for a period of 10 years from the date of purchase. This warranty shall be given in lieu of all other warranties or guarantees, expressed or implied, including, but not limited to any warranty of merchantability or fitness for a particular purpose, and/or any other obligation on the part of Moose. The liability of Moose shall be limited to repair or replacement of materials supplied by Moose and proven to be defective in manufacture. It shall not include any other damages either direct or consequential.
 - 1. The GAMECOURT PVC® is correctly installed over a properly prepared subfloor.
 - 2. The floor is regularly maintained using an approved maintenance system as laid out in the GAMECOURT PVC® Care & Maintenance Guide and using properly maintained equipment and the appropriate cleaning tools.

3. **Within One Year:** If a defect covered by this warranty is reported to Moose in writing within one year of purchase, Moose will supply new material of the same or similar grade sufficient to repair or replace the defective material.
 4. **Within Two Years:** If a defect covered by this warranty is reported to Moose in writing after one year but within two years of purchase, Moose will supply new material of the same or similar grade sufficient to repair or replace the defective material.
 5. **After Two Years:** If a defect covered by this warranty is reported to Moose in writing after two years but within five years of purchase, Moose will supply new material of the same or similar grade sufficient to repair or replace the defective material.
- B. Warranty excludes damage caused in whole or in part by normal wear and tear, abuse, faulty construction of the building including settlement, lack of a moisture barrier for on grade or below grade construction, the failure of associated trades to adhere to specifications, separation of the concrete slab, construction joints, saw joints, expansion joints, excessive dryness or moisture from humidity, spillage, migrations through the slab or wall, or any other source. Additionally, the warranty shall not cover accidental damage.

1.7 **ADDITIONAL MATERIALS**

- A. Furnish to the owner additional materials of each different color and design of the GAMECOURT® PVC.

1.8 **LEED™ CERTIFICATION**

- A. GAMECOURT PVC® should be able to help this facility achieve up to three (3) points towards LEED™ certification.

LEED™ categories positively affected by the vinyl sheet with foam backing system.

-Materials & Resources	credit reference MR 2.1 & 2.2	Points Attainable 1-2
-Indoor Environmental Quality	credit reference EQ 4.1 & 4.2	Points Attainable 1

PART 2 – PRODUCTS

2.1 **MANUFACTURERS**

- A. The basis of the design for the vinyl sheet with foam backing system is Moose Sports Surfaces Ltd., GameCourt PVC®. All other installation accessories and related components must be either made or approved by the vinyl sheet with foam backing surfacing supplier. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.

2.2 **MATERIALS**

- A. All components for GAMECOURT PVC® foam backing system shall be supplied by Moose Sports Surfaces, Ltd.
- B. Adhesive: Recommended adhesive is Acrylic Adhesive (#2525) supplied in a 4-gallon unit. The estimated coverage of #2525 Acrylic Adhesive is 500 SF/unit (125 SF per gallon). A full glue down using two-component Polyurethane Adhesive (#2300) must be used under all bleacher areas. #2300 Polyurethane Adhesive is supplied in 1 gallon units and the estimated coverage is 200 SF/gallon. Apply both adhesives using a 1/16" X 1/16" X 1/16" notched trowel to achieve above coverage rates.
- C. Technical Information

Total Thickness	6.5mm / 0.256"	
Wear Layer Thickness	2.1mm / .08"	
Roll Width	1.8 meters / 5.91' = 5' 10"	
Roll length	15 meters / 49.2' = 49' 2"	
Weight	4.2 kg/m2 / .861 lbs/SF	
Seam Treatment	Heat Weld	
Shore A Hardness	ASTM D 2240	85-90
Force Reduction	DIN 18032-2	33%
Coefficient of Friction	DIN 18032-2	0.4-0.44
Vertical Deformation	DIN 18032-2	0.9mm
Area Deflection	DIN 18032-2	0%
Static Load Limit/Residual Compression	ASTM F 970-00 (250 lbs)	.003
Static Load Limit/Residual Compression	ASTM F 970-00 (500 lbs)	.005
Ball Rebound	DIN 18032-2	99%
Rolling Load	DIN 18032-2	1000N

Impact Resistance	DIN 18032-2	12Nm
Residual Impression	DIN 18032-2	0.17mm
Critical Radiant Flux	ASTM E 648	0.36W/cm ² , Class 1
Chemical Resistance	ASTM D 543	Excellent
Loss of Heating	KS M 38002-99	0.9%
Dimensional Stability by Heating	KS M 38002-99	0.03%
Evaluation of Microbial Action	ASTM G21-96	Class 0
Bacterial Reduction Rate	FC-TM-20-01	99.8%

- D. Game Line Paint – two-component polyurethane. Select from standard colors (GAMECOURT PVC® Line Paint).
- E. Optional Base (specify or delete) – Vinyl wall base; 4" high; select from standard colors.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. It is the responsibility of the general contractor/construction manager to ensure the project/site conditions are acceptable for the installation of GAMECOURT PVC®.
- B. Verify the area in which the GAMECOURT PVC® will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify all other work that could cause damage, dirt, and dust or interrupt the normal pace of GAMECOURT PVC® installation is completed or suspended.
- D. Verify there is a stable room temperature of at least 65° F.
- E. Verify there is no foreign material or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Review and document the results of the moisture test to verify the vapor emission levels/moisture content of the concrete slab is not greater than 5 lbs. of vapor per 1000 square feet per 24 hours per ASTM F1869.
- G. Verify the concrete subfloor surface PH level is within the 7 - 8.5 range.
- H. Verify that the tolerance of the concrete slab is no more than 1/8" in any 10' radius. High spots shall be ground level, and low spots filled in with an approved leveling compound
- I. Report any above discrepancies to general contractor/construction manager prior to commencement of installation.

3.2 PREPARATION

- A. Thoroughly sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is used, it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- B. If necessary or specified, sand the entire surface of the concrete slab.
- C. Lightly tack the floor to remove all dirt and dust.
- D. Adhere to all MSDS requirements for materials employed in the work. Protect all persons from exposure to hazardous materials.
- E. Comply with requirements of athletic flooring material supplier's requirements.

3.3 INSTALLATION

- A. Vinyl Sheet:
 1. Unroll vinyl sheet rolls and allow it to relax 24 – 48 hours BEFORE beginning to adhere. Do not cut vinyl sheet to final dimensions until laid into adhesive.
 2. Thoroughly mix the recommended adhesive and apply directly to the concrete sub floor with a notched trowel per manufacturer's instructions.
 3. Depending on the porosity of the surface being covered, allow the adhesive to become tacky before positioning flooring (approximately 15-30 minutes over a concrete substrate). Flooring must be placed into adhesive within 30 minutes after becoming tacky. Do not allow compression fit at any seams. Roll vinyl sheet with a 100-pound roller and repeat the rolling process on the entire mat 45 minutes after installation. Allow adhesive to cure a minimum of 8 hours before proceeding to the hot weld process.
- B. Heat Weld:
 1. All seams must be heat welded. Heat weld seams 24 hours after installation of the GAMECOURT PVC®. Prepare seams in vinyl sheet flooring with manufacturer's special routing tool and heat weld with vinyl thread and trim weld in accordance with manufacturer's instructions.
- C. Game Lines:

1. Use only high quality masking tape approved by manufacturer.
 2. Manufacturer recommends using standard color line paints because they have been thoroughly tested in the lab and in field applications to meet performance standards. Standard Line Paint colors include white, black, blue, red, yellow and green.
 3. Thoroughly mix two-component GAMECOURT PVC® Line Paint. Line Paint to be applied at the approximate rate of 160 lineal feet per 2" line per ½ kg unit. Double coat Yellow and White lines.
 4. Provide game lines as indicated on drawings.
- D. Wall Base (optional): Install vinyl base anchored to walls with base cement.

3.4 *CLEANING*

- A. Remove all excess and waste materials from the area of work. Dispose of empty containers in accordance with federal and local statutes.

3.5 *PROTECTION*

- A. Cure Time -- no traffic or trades shall be allowed on the surface for a period of three (3) days following completion to allow for complete and proper cure of the finish.
- B. Other Trades -- it is the responsibility of the general contractor to protect the surface from damage by other trades before acceptance by the owner or the owner's authorized agent.
- C. After synthetic floors are installed and the game lines painted, area to be kept locked by general contractor to allow curing time for system. No other trades or personnel are allowed on floor until accepted by owner.