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GAMECOURT®
Sandwich System “Pad & Pour” Guide Specification – DIN System
Division 9 – Indoor Resilient Athletic Surfacing

PART 1 – GENERAL

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the GAMECOURT® indoor resilient multipurpose athletic surfacing.
 - B. Application of the game lines.
- 1.2 *SUBMITTALS*
- A. Product Data:
 - 1. Submit one (1) set of GAMECOURT® “Sandwich System Guide Specifications”.
 - 2. Submit one (1) chart of top coat color options and game line paint color options.
 - B. Samples:
 - 1. Submit one (1) sample of specified 14+2 DIN system.
 - C. Closeout Submittals:
 - 1. Submit one (1) copy of the GAMECOURT® maintenance instructions.
 - 2. Submit one (1) copy of the GAMECOURT® material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
 - 1. The indoor resilient multipurpose athletic surfacing shall be manufactured in an ISO 9001 certified plant.
 - 2. The indoor resilient multipurpose athletic surfacing shall be manufactured in an ISO 14001 certified plant.
 - 3. The indoor resilient multipurpose athletic surfacing supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer of the indoor resilient multipurpose athletic 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® indoor resilient multipurpose athletic surfacing.
 - 2. GAMECOURT® manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
 - 3. GAMECOURT® manufacturer to submit official ISO 14001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- 1.4 *DELIVERY, STORAGE AND HANDLING*
- A. Delivery:

1. GAMECOURT® 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. Store buckets upright and rolls on their side.

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®.
- 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 17MM to accommodate the floor system.
- 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. Typically, 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® 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® 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 / moisture testing **MUST** be performed prior to installation of the GAMECOURT® materials. Either the Calcium Chloride or the Relative Humidity (RH) tests may be performed. For the Calcium Chloride test, the vapor emission of the concrete slab should not be greater than 4 lbs./ 1000 SF / 24 hours when tested per ASTM F1869. For the Relative Humidity test, moisture content must be less than 75 % RH when tested per ASTM F2170. **If both tests are performed, the higher value must be respected.**
 6. Concrete subfloor surface pH level must be within the 7 to 8.5 range.

1.6 *WARRANTY*

- A. Moose Sports Surfaces, Ltd. (Moose) hereby warrants its GAMECOURT® materials to be made to manufacturer's specifications and to be free from defects for a period of one year commencing on the date of substantial completion. 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.

- 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 **LEED™ CERTIFICATION**

- A. GAMECOURT® should be able to help this facility achieve up to eight (8) points towards LEED™ certification.

LEED™ categories positively affected by the indoor resilient multipurpose athletic surfacing

-Materials & Resources	credit reference MR 2.1 & 2.2	Points Attainable 1-2
-Materials & Resources	credit reference MR 4.1 & 4.2	Points Attainable 1-2
-Materials & Resources	credit reference MR 5.1 & 5.2	Points Attainable 1-2
-Indoor Environmental Quality	credit reference EQ 4.1 & 4.2	Points Attainable 1
-Innovation & Design Process	credit reference ID 1.1	Points Attainable 1

PART 2 – PRODUCTS

2.1 **SUPPLIER**

- A. The basis of the design for the indoor resilient multipurpose athletic surfacing is Moose Sports Surfaces Ltd., GameCourt®. All other installation accessories and related components must be either made or approved by the indoor resilient multipurpose athletic 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® shall be supplied by Moose Sports Surfaces, Ltd. All polyurethane component materials shall not contain ANY lead, mercury, nor any heavy metals, PCB, or formaldehyde.
- B. Primer (if specified or necessary) shall be a one-component polyurethane (GAMECOURT® Primer) and VOC shall not be greater than 97 g/L.
- C. Adhesive shall be a two-component polyurethane (GAMECOURT® Adhesive) and VOC shall not be greater than 0 g/L.
- D. Base mat shall be a prefabricated rubber mat made of all recycled rubber granules bound with MDI polyurethane and manufactured to a constant thickness.
- E. Base mat density – 35 lbs./cu.ft. for normal applications.
- F. Base mat thickness – 14MM as specified.
- G. Fiber mesh scrim.
- H. Scratch Coat (mat sealer) – two-component, thixotropic polyurethane compound (GAMECOURT® Scratch Coat) and VOC shall not be greater than 0 g/L.
- I. Wear Coat – two-component, pigmented, self-leveling polyurethane and seamless (GAMECOURT® Wear Coat) and VOC shall not be greater than 8.07 g/L.
- J. Total wear thickness – 3.00MM throughout the floor.
- K. Pigmented color: gray (standard).
- L. Technical Information (Test reports supplied upon request):

Shock Absorption (DIN 18032/2 min. 51% – cat. 1; min. 45% – cat. 2) 14+2	51.0%
Impact Resistance at 10° C. (DIN 18032/2 min. of 8 Nm)	> 10 Nm
Standard Vertical Deformation (DIN 18032/2 max. 3.5mm – cat. 1; max. 3.0mm – cat. 2)	0.99-2.50mm
Rolling Load (DIN 18032/2 1000 N.)	1000 N
Remaining Indentation/Residual Impression (DIN 18032/2 max. 0.5mm)	0.21 - 0.37 mm

Ball Rebound (DIN 18032/2 min. 90%)	99%
Sliding Coefficient of Friction (DIN 18032/2 min. 0.4 – max. 0.6)	0.42 - 0.55
Area Deflection (DIN 18032/2 – max value 0%)	0%
Inflammability of Top Layer (DIN 51960)	Class I / Not flammable

Top Wear Layer Properties:

Tensile Strength (DIN 53504)	7.0 N/mm ²
Elongation at Break (DIN 53504)	150%
Shore A Hardness	80 Shore A

- L. Water-Based Top Coat (matte finish) – two-component polyurethane and VOC shall not be greater than 41 g/L. Select from standard colors (GAMECOURT® Water-Based Top Coat).
- M. Game Line Paint – two-component polyurethane. Select from standard colors (GAMECOURT® Line Paint).
- N. 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®.
- B. Verify the area in which the GAMECOURT® 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® 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. 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. Primer: if specified or necessary, roller-apply GAMECOURT® Primer to concrete or asphalt (please specify substrate) per manufacturer’s instructions.
- B. Base Mat:
 - 1. Unroll base mat and allow it to relax. Do not cut base mat to final dimensions until laid into adhesive. Thoroughly mix the two-component polyurethane GAMECOURT® Adhesive and apply directly to the concrete sub floor per manufacturer’s instructions. Install base mat into freshly applied adhesive. Do not allow compression fit at any seams. Roll base mat with an 80-pound linoleum roller and repeat the rolling process on the entire mat 45 minutes after installation.
 - 2. Allow adhesive to cure proceeding to scratch coat.
- C. Scratch Coat:
 - 1. Thoroughly mix the two-component GAMECOURT® Scratch Coat.

2. Apply 3 layers of GAMECOURT® scratch coat and fiber mesh scrim to base mat per manufacturer's instructions. Allow each layer to cure before proceeding to the next application. Inspect for and fill all gaps applying additional material as needed.
- D. Wear Coat:
 1. Thoroughly mix two-component GAMECOURT® Wear Coat.
 2. Apply mixed material per manufacturer's instructions.
 3. Allow Wear coat to cure proceeding to top coat.
- E. Finish Water-Based Top Coat (Matte Finish):
 1. Thoroughly mix two-component polyurethane GAMECOURT® Water-Base Top Coat per manufacturer's instructions.
 2. Allow top coat to cure before applying game lines.
- F. 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.
 3. Thoroughly mix two-component GAMECOURT® Line Paint. Apply line paint per manufacturer's instructions.
 4. Provide game lines as indicated on drawings.
- G. 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 one (1) week following completion to allow for complete and proper cure of the finish.
- B. Cure Time – no heavy items or heavy installation (i.e. – 10 row bleachers or above) for a period of four (4) weeks following completion to allow for complete and proper cure of the wear coat layer.
- C. 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.
- D. 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.