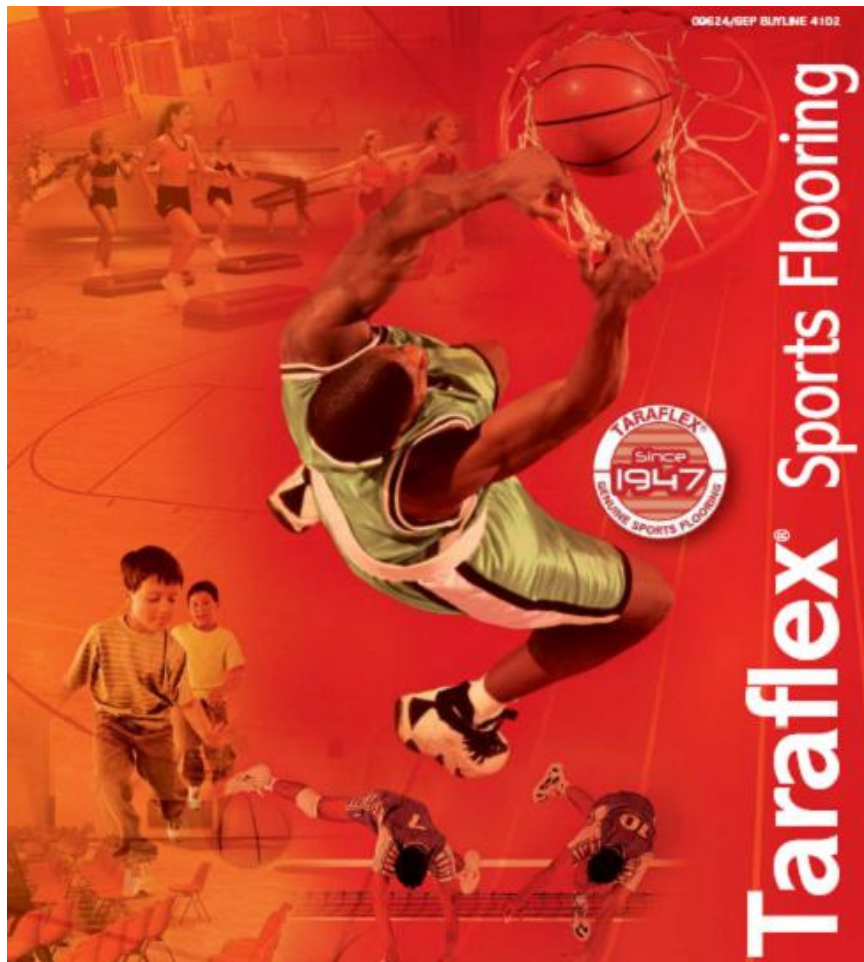




# Gerflor Taraflex Installation Guidelines

Technical Recommendations for the U.S.  
Market

Official Start Date: January 2007



**STOP!**

Read carefully through the entire manual before starting any work.

Do not install any Taraflex Sport Flooring unless you are certain that the site conditions are acceptable according to Gerflor's recommended procedures found within this manual. No work should be performed unless all other trades have completed their scopes and no longer occupy your workspace. All instructions supplied within this manual must be strictly enforced. If you have any doubts about jobsite conditions, the contents of this manual, or require technical assistance, contact the Gerflor Technical Assistance Service **BEFORE** commencing any part of the installation. The Technical Assistance Service can be reached at:

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

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## **1. PERMANENT INSTALLATION FULL SPREAD ADHERING**

### **For all Taraflex Resilient Sheet Products**

#### **1.1. ROLLS SHOULD BE STORED UPRIGHT AT ALL TIMES**

Store on clean flat solid surfaces in a controlled environment. Do not store outside.

#### **1.2. PREPARATION OF SUBFLOOR**

Subfloor Preparation (General Contractor)

- The General Contractor will supply a smooth, flat concrete finish which will be achieved manually or mechanically. The slab will have a tolerance of + or - 1/8" in a 10' radius. Respect ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring".
- The concrete subfloor will be cured for a minimum of at least sixty (60) days.
- The concrete floor temperature will have to be maintained at a minimum of 65°F (18°C) for one week prior, during, and permanently thereafter the installation. The concrete must be tested according to ASTM F1869 Standard Test Method for Measuring Moisture Evaporation Rate of Concrete Subfloor Using Anhydrous Calcium Chloride and/or ASTM F2170 "Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using *In-Situ* Probes". Slab is not to exceed 5lbs/1000 sq ft/24 hrs per ASTM F1869 and not to exceed 75% RH per ASTM F2170.
- Before proceeding with any work, inspect the subfloor surface and report in writing to the Project Manager and the General Contractor any visible defects on the surface such as cracks, bumps, rough areas or variations in evenness.
- Check for grease, oil, paint, dust or any contamination remaining on the concrete subfloor.
- Before proceeding with the TARAFLEX material installation, clean the concrete surface to remove any dirt or foreign materials. Sanding of the subfloor is mandatory. It may be necessary to scarify or bead-blast concrete surface to remove existing adhesives, paint or other surface applied materials.
- The General Contractor shall patch and repair all cracks, voids and other imperfections of concrete with high strength portland cement based patching materials - Ardex K-15 or equal, approved by the manufacturer. Do not use gypsum based patching materials. If concrete is out of level then it should be properly leveled by an experienced underlayment contractor using cement based material that will provide a minimum of 3,000 psi. compressive strength and sufficiently bound to existing clean concrete surface Ardex K-15 or equal, approved by the manufacturer . After completion of sanding, patching and leveling, vacuum or sweep entire surface of concrete to remove loose dust and dirt before starting the installation of material.
- Do not bridge resilient flooring over expanding/contracting floor joints. Observe ASTM F710.

#### **1.3. UNROLLING FLOORING MATERIAL**

- Installation temperature shall be at least 65°F (18°C) maintained for one week prior to and during installation.
- Mark the center starting line. Finished installation should be square to the room.
- Lay the first length of Taraflex along this chalk line and then work progressively outward, leaving a small gap (1/4" minimum) between the sheets to allow the material to relax for at least 24 hours. Before gluing, bring the loose sheets closer together leaving a gap of 1/32" (1mm). This is approximately the width of a credit card.

#### **Material inspection**

**Note:** Inspect all TARAFLEX sheets carefully to verify that correct colors, patterns and quality have been shipped. Do not install, cut, or fit any material that has visible defects. Material that may have minor edge damage should have such damage trimmed and removed prior to installation of the sheets.

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### General installation

TARAFLEX Sport is placed lengthwise in the facility starting at the center line unless patterns or design schemes dictate otherwise.

## 1.4. INSTALLING FLOORING MATERIAL

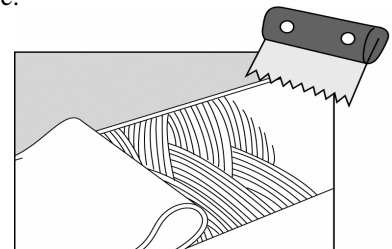
The rolls are brought closer together leaving 1/32" (1 mm) between the strips before gluing.

## 1.5. ADHESIVES

### 1.5.1. METHODS

#### ACRYLIC GLUING-UP TO **5LBS** PER ASTM F1869

- Use only a Gerflor approved adhesive.
- Respect the guidelines indicated on the pail of adhesive.
- Recommended trowel gauge:
  - For Porous Substrates -1/16" x 1/16" x 1/16" square notched.
  - For Nonporous Substrates – 1/32" x 1/16" x 1/32" V notched.
- To assure uniform adhesion of the entire surface, only spread a workable amount of adhesive at one time.
- Maintain a uniform spread rate. Replace trowel (or trowel blade) with every pail spread.
- *Immediately after troweling the adhesive onto the concrete use a medium napped paint roller saturated with adhesive to flatten out visible trowel marks.*
- "Open" and "Working" times are dependent upon porosity of the substrate, temperature, and humidity. It is important that the installer familiarize themselves with the adhesive before commencing actual installations. Insufficient open time for acrylic glue will cause bubbling. Too long of an open time will result in poor adhesive transfer.
- Monitor temperature and humidity during installation.
- Once material is placed into the adhesive, immediately roll thoroughly with a 100 lb (minimum) roller.
- Prohibit traffic for a minimum of 48 hours after placement into the adhesive.



#### POLYURETHANE METHOD UP TO **5 LBS** PER ASTM F1869

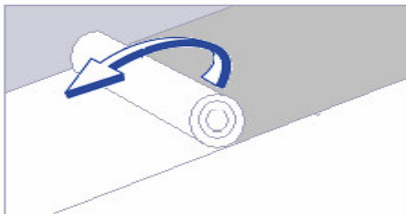
- Use only a Gerflor approved adhesive.
  - Respect the guidelines indicated on the pail of adhesive.
  - To assure uniform adhesion of the entire surface, only spread a workable amount of adhesive at one time.
  - Recommended trowel gauge: Only use a 1/32" x 1/16" x 1/32" trowel.
  - Prior to full spread adhesion, it is recommended that an adhesion test be carried out on a small area.
-

- Before spreading the adhesive, stir the adhesive with a low speed mechanical mixer for approximately 2 minutes. Be sure to mix completely. This will make the adhesive easier to spread and in ensures proper uniform consistency.
- All urethane open times are dependent upon humidity, temperature, and/or the addition of a catalyst such as found with 2 part epoxies. Installers should familiarize themselves with the adhesive prior to application on an actual project.
- Adhesive is a “wet” set. Trowel marks should either be “knocked down” or greatly reduced upon rolling. Back rolling the adhesive with a medium napped paint roller saturated in the adhesive will remove the trowel marks completely and it may expedite the open time in low humidity conditions. (1 part urethanes)
- Monitor temperature and humidity during installation.
- Once material is placed into the adhesive, immediately roll thoroughly with a 100 lb (minimum) roller.
- Avoid adhesive displacement by restricting traffic. Use knee pads that disperse weight evenly and on a flat plane. (Such as ProKnee) Otherwise, use flat panels to place your knees and feet during trimming or etc.
- Prohibit traffic for a minimum of 24 hours after placement into the adhesive.

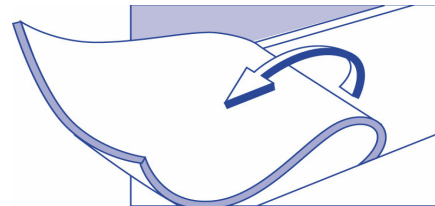
## 1.6. LAYING PROCEDURE

- Starting from the center line and working outward, fold the sheets back halfway and apply the adhesive to the subfloor. Installer may also use the “roll” method. With the roll method, do not pre-cut material as if to be the final trim. Leave material a few inches long for trimming after placement.
- Position the first half of the sheet (or sheets) into the adhesive, and then repeat this procedure with the second half. Do not leave a partial roll of material unadhered while the other side’s adhesive sets. This will help to avoid telegraphing of glue lines. To reduce potential bubbling during installation, it is recommended to roll the material into the adhesive. Keep the roll tight while placing into the adhesive. Keep the slack out of the roll aids in keeping even pressure across the width of the roll improve resistance to bubbling. If this approach is used, do not pre-cut the material. It will need to be left long and trimmed after placement. The fold back method is acceptable, but care must be taken to not move too quickly. Pushing the material back into the adhesive too fast may engulf air and create more effort needed to remove bubbles. Do not flop rolls back into adhesive.
- Continue laying sheets by butting the edges, overlapping and double cutting through both sheets using a straight edge, trace cutting, or scribing. The goal is to produce a uniformly spaced seam for welding.
- Always double check the installation while gluing with the lights on and off. The use of light and shadow can help with determining imperfections.

### ROLL BACK METHOD



### FOLD BACK METHOD



### DO NOT “FLOP” MATERIAL BACK INTO ADHESIVE

\*\*\* IMPORTANT: Check the square of the room and compare it to the square of the basketball goals if they are in place. If the goals are not properly squared to the room, it will need to be determined which direction you will need to go. Either the goals should be altered, material is to be squared to the room, or squared to the goals. This is especially true with Gerflor’s wood grained products.

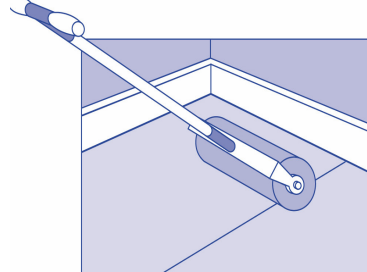


## 1.7. ROLLING

### 1.7.1. ACRYLIC GLUING

- Manually: immediately after material is positioned onto the adhesive as necessary. Using a 100 pound (minimum) flooring roller, roll the entire surface thoroughly.

\*\*The use of knee pads by Pro Knee are highly recommended. They offer strong protection to the installer and decrease the possibility of adhesive displacement. [www.proknee.com](http://www.proknee.com)



### 1.7.2. POLYURETHANE METHOD

Note: Rolling is done in multiple stages

- First manually remove visible bubbles with a piece of cork or a wooden board wrapped in carpet or similar material. Be careful not to displace the adhesive. Use plywood or other flat material that will disperse the installer's weight. It is recommended; until the adhesive is completely dry, to walk on the floor using plywood or similar product. Bubbles must be removed before adhesive becomes hard set.



- Second, roll the floor 1 hour later using a 100 lb minimum roller. Last final rolling is done 1 hour later.
- Cross seams may need to be weighted to avoid "cupping". Use weight that will not leave permanent indentation due to adhesive displacement.

## 1.8. SEAMING OF JOINTS (HEAT WELDING METHOD)

### 1.8.1. MECHANICAL ROUTING:

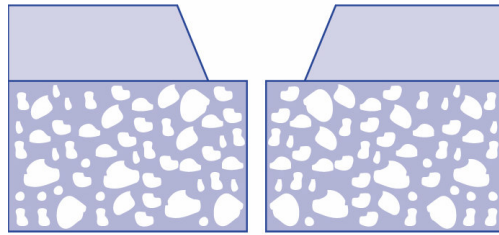
Use an electric routing machine by Leister Equipment or JANSER Company or equal, approved by manufacturer. Keep all gullies clean prior to heat welding.

Use only Gerflor approved grooving tools such as products offered by Leister and Sinclair.



A. FOAM BACKED SHEET

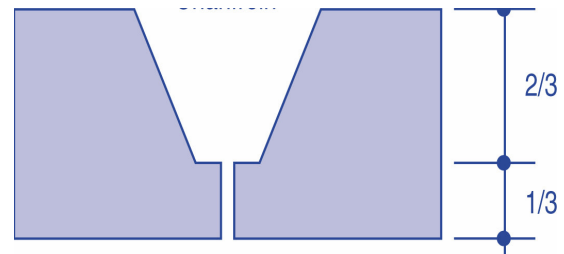
Rout only through depth of wear layer.  
Do not go into the foam.



➤ **Taralex Surface and Tennis (chemical weld acceptable)**

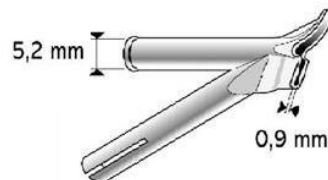
B. NON FOAM BACKED SHEET.

Rout to  $\frac{3}{4}$  of total thickness



1.8.2. MANUAL WELDING:

- This must be done with a heat welding gun with variable temperature control and a speed weld nozzle by Leister Equipment Company or equal, approved by manufacturer.
- Nozzle size is 5 mm. Use only the Leister Speed Tip #105433 (Winkelman's number is WDD722). Keep tip perfectly vertical. Tilting from side to side will result in a non-uniform weld.



1.8.3. MECHANICAL WELDING (REQUIRED IN LARGE AREAS)

- This is done using a Leister Universal type automatic welding machine with a variable temperature hot air gun and a multi-outlet nozzle. Do not allow welder to operate without supervision. Prohibit traffic during welding.

Use only Gerflor approved auto-matic heat welders such as Leister's Uni-weld system.



Set the pressure of the guide to avoid forcing the weld into the seam (see tool manufacturer's guidelines).

\*\*\* With mechanical type welders, it is important to always stay with the unit while it is in operation. Gapping of the seam 1mm wide will help to allow the welder to stay on track. Do not let the unit skip out of the seam. Pay careful attention to speed and proper weld bonding.

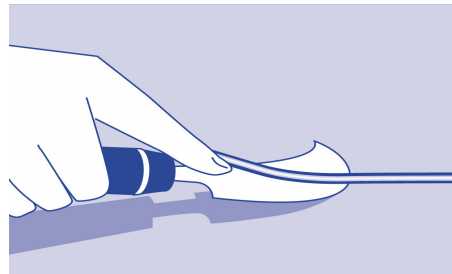
\*\*\* In both installation types, do not heat weld resilient flooring for a minimum of 24 hours after the material has been placed into the adhesive.

\*\*\* Respect ASTM F1516 “Standard Practice for Sealing Seams of Resilient Flooring by the Heat Weld Method.

#### **1.8.4. FINISHING (SEAM SKIVING)**

Trimming is done in two stages once the welding rod and material have completely cooled.

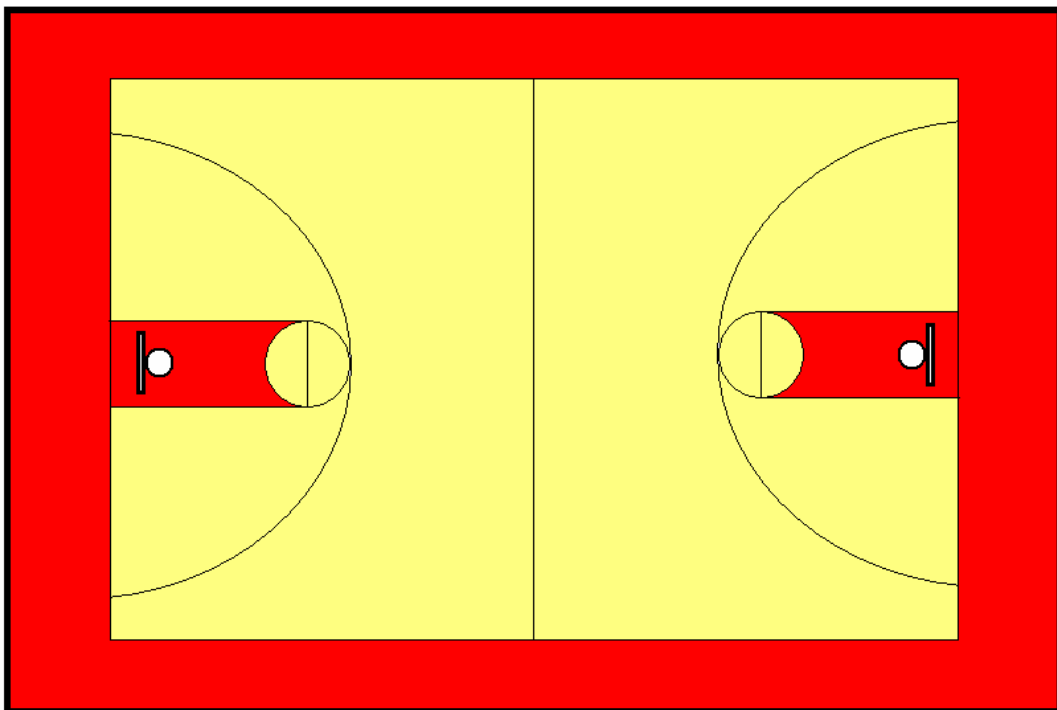
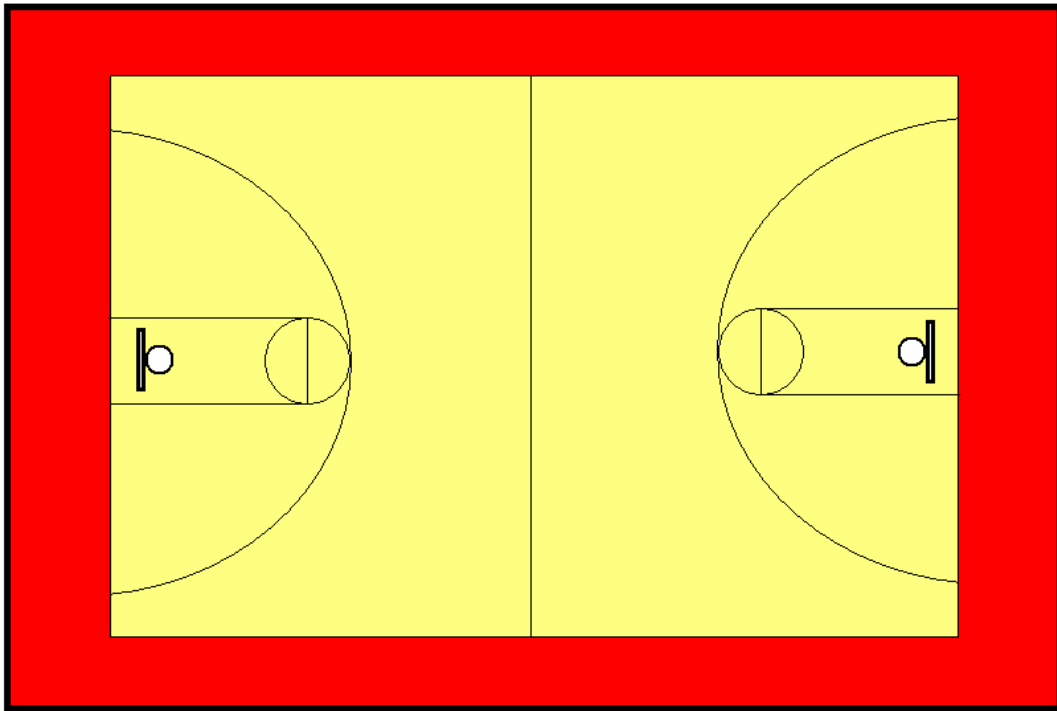
- Trim flush with the floor using a “moon knife or Gerflor Seam Plane (see tool list).
- After the welding rod is trimmed smooth or flush with the top surface, check the entire seam to ensure that the welding cord is bonded properly and is flush with the top wear layer.

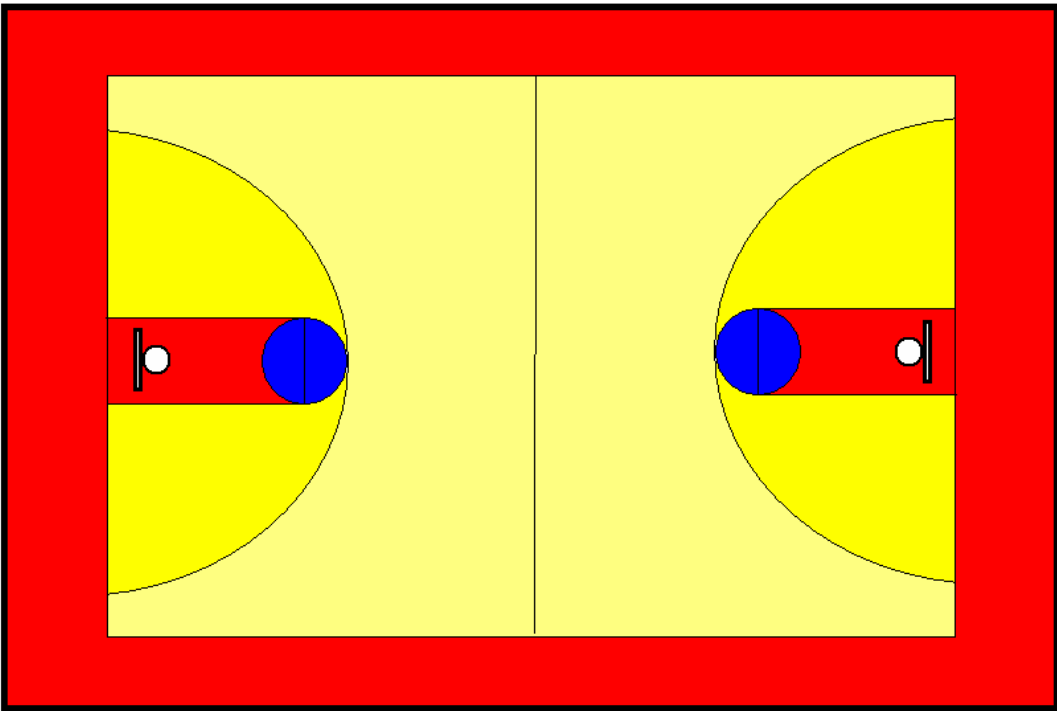
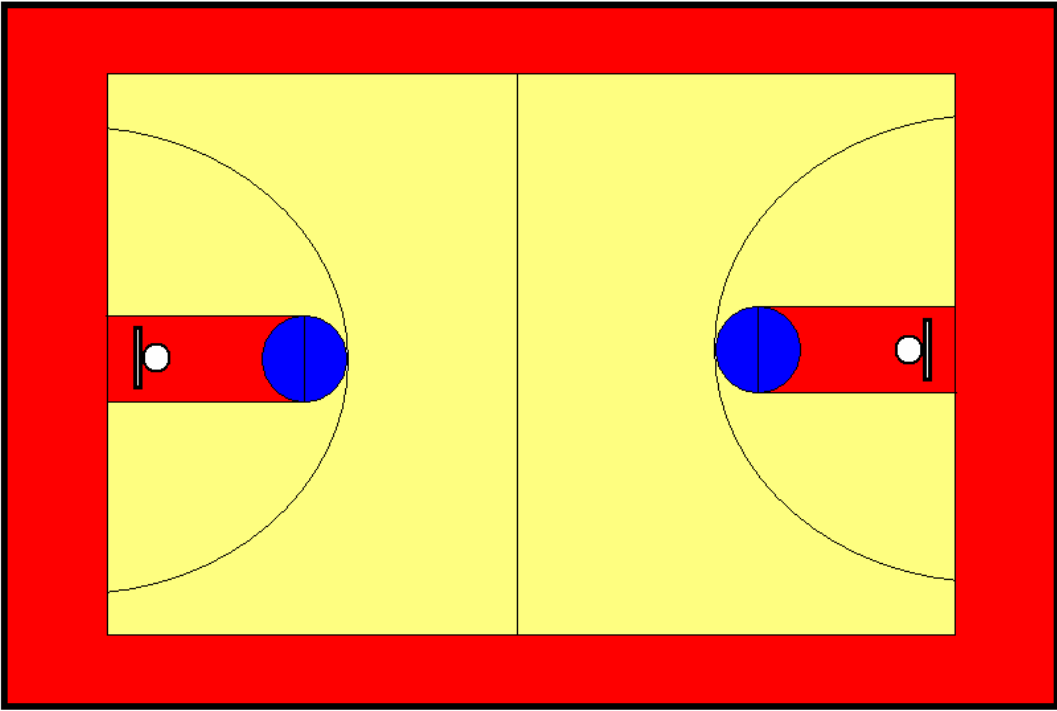


#### **1.8.5. UPON COMPLETION OF THE INSTALLATION**

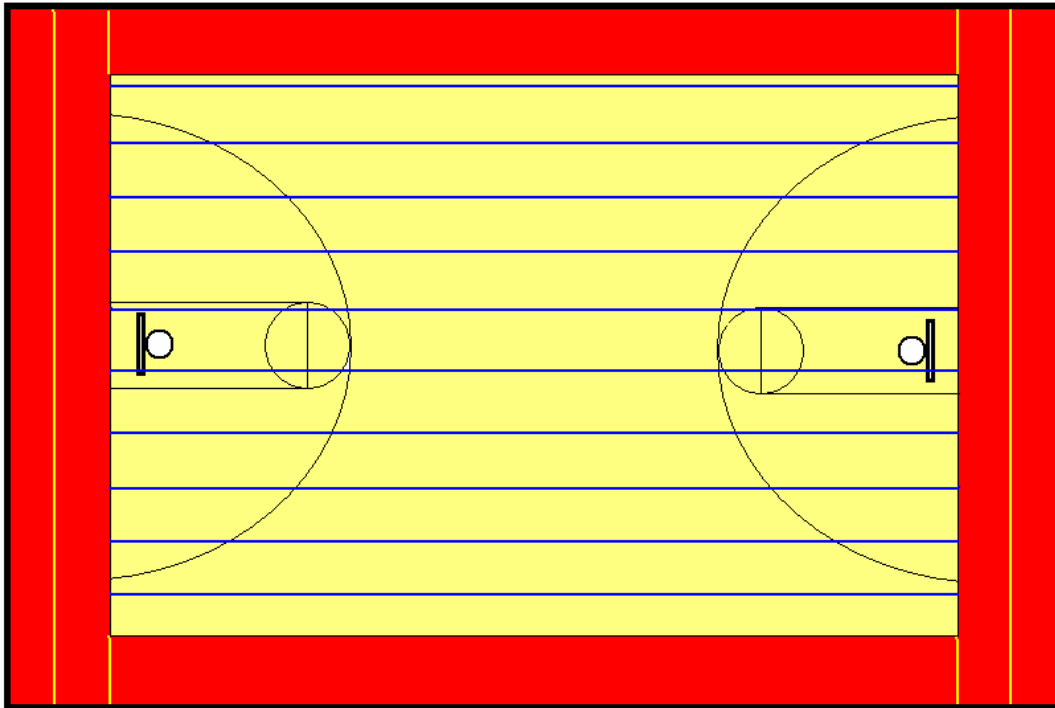
- Visually inspect entire project for visual imperfections.
- Double check all heat welds for uniformity. Repair all imperfections prior to leaving the project.
- Ensure all exposed vertical abutments such as door jambs are cut tightly (net) and sealed with a water proof sealant such as clear silicone or equivalent.
- At all volleyball inserts, the material must be cut neatly and cleanly to form a tight, net fit. It is recommended to apply a small 3”-4” band of urethane adhesive around the volleyball sleeve to help protect from water intrusion during maintenance. Any gaps must be repaired or filled with a permanent waterproofing sealant.
- Inspect all welds for smoothness and tightness to each side of the seam. A proper weld will be complete (with no gaps) on either side. Repair welds before leaving the project.

#### 1.8.6. LAYOUTS- USE COLORS FOR VISUAL EFFECT





## TYPICAL LAYOUT FOR WOOD GRAIN AT GAME AREA WITH BORDER



### *IMPORTANT*

Running “true” to the squareness of the room is an important part of the installation, especially with patterned or grained products. Check the room for square. If the basketball goals are in place. It is also important to double check the square with the centerline of the baskets. If the room and the baskets are out of alignment, a decision must be made to either repair the misaligned baskets or to determine whether to stay true to the baskets or to stay true to the room.

## **1. PERMANENT INSTALLATION USING ISOLSPORT MOISTURE BARRIER**

**For all foam backed Taraflex Resilient Sheet Flooring. Not for use with Taraflex “Surface”**

For areas where moisture levels may be a concern up to **10 LBS** per ASTM F1869, we suggest the use of ISOLSPORT.

ISOLSPORT is a waterproofing and insulating fiberglass underlayment that creates a vapor barrier between the subfloor and the flooring materials, assuring good dimensional stability, heat insulation, sound absorption, and moisture control.

ISOLSPORT can be used to bridge over existing expansion/contraction joints when directly glue applications can not. See further in the document for details.

### **1.1. ROLLS SHOULD BE STORED UPRIGHT AT ALL TIMES**

### **1.2. PREPARATION OF SUBFLOOR**

Subfloor Preparation (General Contractor)

- The General Contractor will supply a smooth, flat concrete finish which will be achieved manually or mechanically. The slab will have a tolerance of + or - 1/8” in a 10’ radius. Respect ASTM F710 “Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring”.
- The concrete subfloor will be cured for a minimum of at least sixty (60) days.
- The concrete floor temperature will have to be maintained at a minimum of 65°F (18°C) for one week prior, during, and permanently thereafter the installation. The concrete must be tested according to ASTM F1869 Standard Test Method for Measuring Moisture Evaporation Rate of Concrete Subfloor Using Anhydrous Calcium Chloride and/or ASTM F2170 “Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using *In-Situ* Probes”. Slab is not to exceed 5lbs/1000 sq ft/24 hrs per ASTM F1869 and not to exceed 75% RH per ASTM F2170.
- Before proceeding with any work, inspect the subfloor surface and report in writing to the Project Manager and the General Contractor any visible defects on the surface such as cracks, bumps, rough areas or variations in evenness.
- Check for grease, oil, paint, dust or any contamination remaining on the concrete subfloor.
- Before proceeding with the TARAFLEX material installation, clean the concrete surface to remove any dirt or foreign materials. Sanding of the subfloor is mandatory. It may be necessary to scarify or bead-blast concrete surface to remove existing adhesives, paint or other surface applied materials.
- The General Contractor shall patch and repair all cracks, voids and other imperfections of concrete with high strength portland cement based patching materials - Ardex K-15 or equal, approved by the manufacturer. Do not use gypsum based patching materials. If concrete is out of level then it should be properly leveled by an experienced underlayment contractor using cement based material that will provide a minimum of 3,000 psi. compressive strength and sufficiently bound to existing clean concrete surface Ardex K-15 or equal, approved by the manufacturer . After completion of sanding, patching and leveling, vacuum or sweep entire surface of concrete to remove loose dust and dirt before starting the installation of material.

Note: Saw Cut control joints do not require patching or filling (1/8th” or less). All other moving joints should be filled with an elastomeric sealant as directed by the sealant manufacturer, architect, and/or General Contractor for that particular type of joint. Sealant should be cured completely prior to resilient flooring installation. Sealant should be flush and flat with the surface of the slab.

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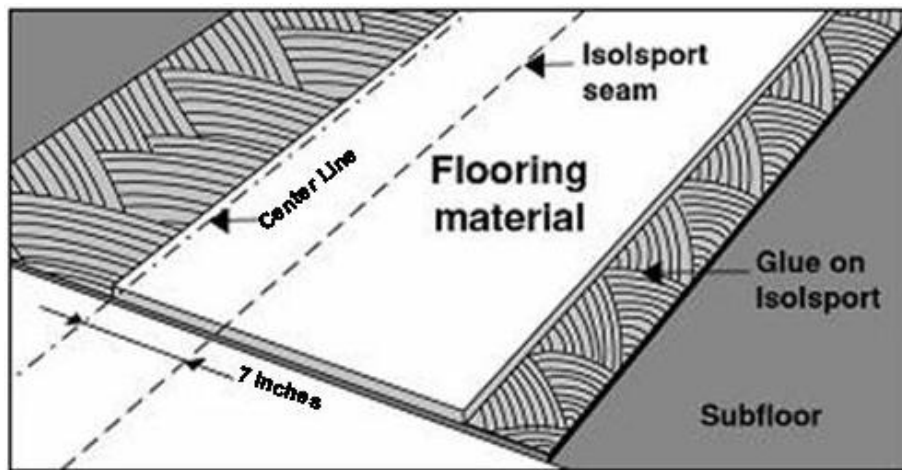
**Material inspection:**

*Note: Inspect all ISOLSPORT sheets carefully. Do not install, cut, or fit any material that has visible defects or disparities. Inspect all Taraflex Sports Flooring Sheets to verify that correct colors, patterns, and quality have been shipped. Do not cut, install, or fit any material that has visible defects. Minor edge damage should be trimmed prior to installation of the sheets.*

**1.3. ISOLSPORT INSTALLATION (6'6'') AND FLOORING LAYOUT (4'11'')**

Installation temperature shall be at least 65°F (18°C) 1 week before, during, and after installation. Using a chalk line, trace the center line axis and offset a mark at 6.7'' (17cm or 7'' approximately). Do not allow seams of Isolsport to be any closer to the seams of the surface flooring than 7 inches. The ISOLSPORT material must be unrolled lengthwise staggering the joint by starting at 6.7'' (17cm-7 inches approximately) from the center line. Do not install Isolsport Barrier crosswise with the surface flooring. Run in the same direction only. The core of the flooring roll must be placed along the walls.

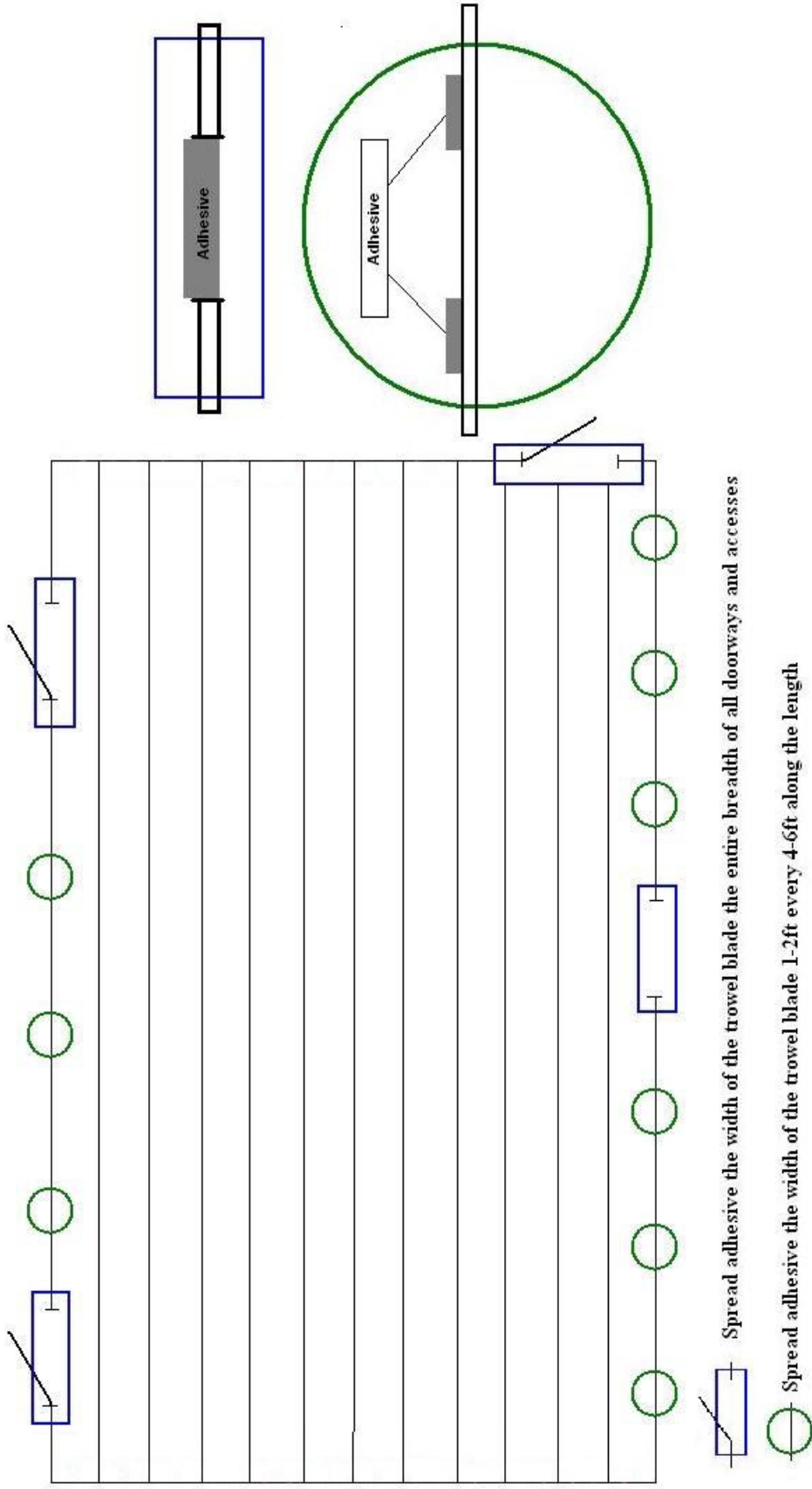
\*To avoid puckering of the Isolsport during transport of the Taraflex material, travel at 90° angles. Transport the material into the work area perpendicular to the Isolsport seams, turn 90 degrees, then travel down the length of the Isolsport until final destination is reached.

**1.4. INSTALLATION OF THE TARAFLEX SPORT FLOORING**

After the required 24 hours relaxation period, the rolls are brought closer leaving a small gap of 1/32 '' (1mm) between each strip before gluing. FOLLOW FULL SPREAD GLUING RECOMMENDATIONS.

ISOLSPORT must be fully adhered at all doorways and main accesses (hallways, etc) with Gerflor's recommended urethane adhesive. See diagram on the following page for more details.

Glue the Isolsport to the slab with a 3''-4'' band of urethane adhesive around all volleyball sleeves.



## 1.5. ADHESIVES

There are two recommended adhesion methods:

### 1.5.1. THE ACRYLIC METHOD

This type of installation method is recommended for areas that will not incur moisture problems. This type of system applies to situations where full spread adhering is incompatible. Care must be taken when encapsulating an existing flooring. VCT, Wood and other similar “breathable” floorings can be affected once covered with a monolithic surface. The slab must be tested and the existing installation should be thoroughly analyzed prior to the commitment of installation.

- This type of installation is used to install Taraflex Foam Back Sheet Flooring over surfaces where direct gluing is not possible.
- The Isolsport will still need to be properly bonded.
- Use only Gerflor’s recommended acrylic adhesive.
- Use only a 1/32” x 1/16” x 1/32” trowel.
- Prior to full spread adhesion, it is recommended that an adhesion test be carried out on a small area.
- To avoid adhesive bubbling, it is recommended that the adhesive be given sufficient time to « tack-up » before laying the material. Treat the Isolsport as a NON-POROUS surface.
- Use a medium napped paint roller saturated with adhesive to remove the trowel marks immediately have the glue is spread.
- Acrylic Method can not be used with Bleachers. Refer to the Bleacher recommendations.

#### **\* FOLLOW THE FULL SPREAD ACRYLIC ADHESIVE GUIDELINES**

### 1.5.2. POLYURETHANE METHOD

(When the subfloor with or without vapor barrier displays a moisture level between **UP TO 10 LBS** per ASTM F1869).

- Use only Gerflor’s recommended urethane adhesive.
- Use only a 1/32” x 1/16” x 1/32” trowel.
- Prior to full spread adhesion, it is recommended that an adhesion test be carried out on a small area.
- Isolsport must be adhered along the wheel path from the adjoining wall to the full length of the bleacher when fully opened. Use only Gerflor’s recommended urethane adhesive. The band of adhesive should be approximately 18”-24” in width depending on the wheels’ path and design. The goal is to create a solid base secure to the slab along the each wheel’s path to avoid creeping of the Sports Flooring.

#### **\* FOLLOW THE FULL SPREAD URETHANE ADHESIVE GUIDELINES**

### 1.5.3. BLEACHERS

- REFER TO THE SECTION “BLEACHERS” FOR MORE INFORMATION
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## **1. PERMANENT INSTALLATION TARAFLEX EVOLUTION AND EBS**

### **For all Taraflex Resilient Sheet Products**

#### **1.1. ROLLS SHOULD BE STORED UPRIGHT AT ALL TIMES**

Store on clean flat solid surfaces in a controlled environment. Do not store outside.

#### **1.2. PREPARATION OF SUBFLOOR**

Subfloor Preparation (General Contractor)

- The General Contractor will supply a smooth, flat concrete finish which will be achieved manually or mechanically. The slab will have a tolerance of + or - 1/8" in a 10' radius. Respect ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring". for specific tolerances for concrete flatness, level, and quality.
- The concrete subfloor will be cured for a minimum of at least sixty (60) days.
- The concrete floor temperature will have to be maintained at a minimum of 65°F (18°C) for one week prior, during, and permanently thereafter the installation. The concrete must be tested according to ASTM F1869 Standard Test Method for Measuring Moisture Evaporation Rate of Concrete Subfloor Using Anhydrous Calcium Chloride and/or ASTM F2170 "Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using *In-Situ* Probes". Slab is not to exceed **12lbs/1000 sq ft/24 hrs** per ASTM F1869 and not to exceed **90% RH** per ASTM F2170.
- Before proceeding with any work, inspect the subfloor surface and report in writing to the Project Manager and the General Contractor any visible defects on the surface such as cracks, bumps, rough areas or variations in evenness.
- Before proceeding with the TARAFLEX EVOLUTION material installation, clean the concrete surface to remove any materials that will affect the installation.
- "Saw Cut" control joints can be bridged with no additional treatment. Expansion/Contraction joints can be bridged. However, these joints should be filled with an appropriate elastomeric sealant by the General Contractor prior to installation of the flooring.

#### **1.3. JOBSITE CONDITIONS**

- Installation temperature shall be at least 65°F (18°C) maintained for one week prior to and during installation.
- If materials have been stored in an un-acclimated environment, ship the Evolution to the project and allow to acclimate at least 3 days prior to installation. Otherwise, acclimation is not necessary.

#### **Material inspection**

**Note:** Inspect all Evolution planks carefully to verify that correct quality and product has been shipped. Do not install, cut, or fit any material that has visible defects.

#### **Direction of layout**

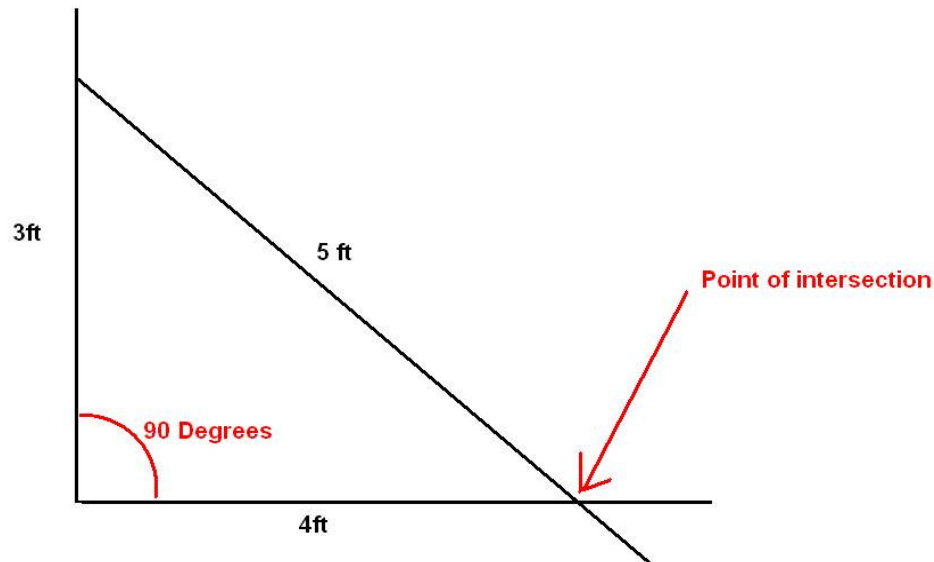
TARAFLEX EVOLUTION is laid in the same direction as the sheet flooring material. No exceptions.

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#### 1.4. JOBSITE CONDITIONS

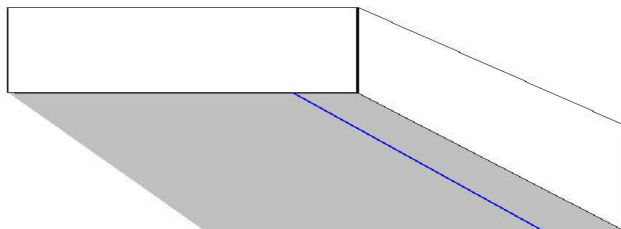
- Measure length and width of room. Use these measurements to determine the expansion space required for the Evolution substructure.
- Expansion spaces must be allowed for all walls, columns, door casements, and other vertical abutments.
- Maintain a uniform, expansion space of approximately  $\frac{3}{4}$ ". Never allow less than  $\frac{1}{2}$ " for projects larger than 1,000 sq ft.
- Use the 3,4,5 Method for determining square. For longer distances, simply double, triple, or quadruple the distance for each of the measurements. i.e. 3,4,5/6,8,10/9,12,15 and etc.

\*\*\* IMPORTANT: Check the square of the room and compare it to the square of the basketball goals if they are in place. If the goals are not properly squared to the room, it will need to be determined which direction you will need to go. Either the goals should be altered, material is to be squared to the room, or squared to the goals. This is especially true with Gerflor's wood grained products.



#### 1.5. STARTING LINES AND BUILDING THE TEMPORARY WALL

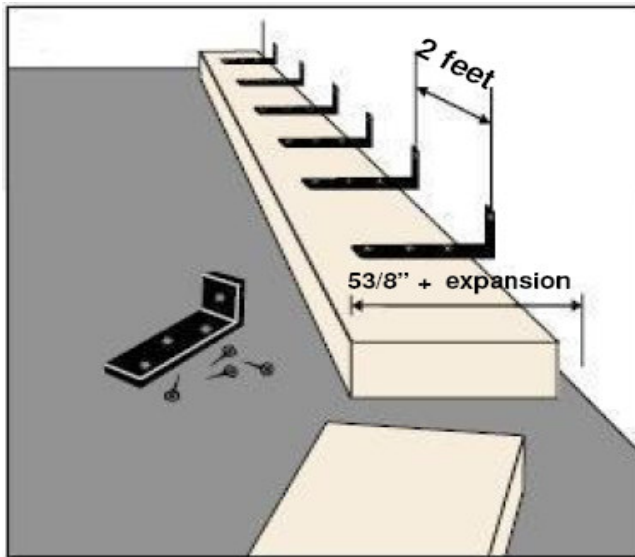
- Once the expansion space is determined, drop a chalk line along the starting wall. The starting wall will typically be the longest straightest wall. The distance from the wall will be the width of one plank of Evolution + the necessary expansion space. There will most likely be some minor deviation in the wall. Remember to have no less than  $\frac{1}{2}$ " expansion space for areas less than 1,000 sq ft.



Hint:

Add  $\frac{3}{4}$ " maximum necessary expansion to the width of the plank ( $\frac{53}{8}$ "). The total allowance for the starting line from the wall would be  $\frac{61}{8}$ ".

- Along the set wall, fasten securely the 2' x 4' x 8' (or longer) by two methods. Select a good grade of board that is as straight as possible. This will reduce the amount of manipulation of the board to align with the starting chalk line. Deviations in the board once firmly secured, can create problems with the installation of the Evolution.
  - Use the angle iron pieces found in the Nilsen Kit as shown below.



Note:

This system of anchoring the starting wall works with studded walls. The minimum spacing is approximately 2 ft. However, stud spacing will likely be less. Be sure to anchor the angle iron into the studs securely. Do not anchor into drywall or other wall covering that could potentially be damaged. Use standard drywall screws of no more than 1/1/14\" in length for the stud.

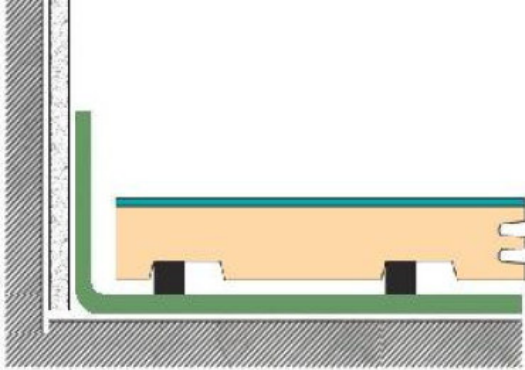
- Use a removal concrete fastening system such as “Tapcons” to anchor the 2 x 4 boards. There are other methods for anchoring as well. Remember, you will have to remove the board later.

\*\*\* With either method used, it is necessary to attach the boards securely with no movement. This temporary starting “wall” must be firm enough to withstand the blows of the mallet used to install Evolution. An un-secured or flimsy attachment will cause the Evolution to “bounce” when being tapped.

## 1.6. EBS – EVOLUTION BARRIER SYSTEM

- Loose lay one sheet only of the EBS. Each sheet is 12 feet in width. Installing too much EBS at one time will increase the chance of tear or puncture.
- Overlap enough EBS over the temporary starting wall (2 x 4 boards) that once the starting wall is removed, the EBS will flash up the wall a few inches.
- Once the Evolution reaches approximately 18”-24” away from the edge of the EBS, install another sheet of EBS. Apply seam tape to the edge of first sheet of EBS. (read below)
- Measure 6”-9” from the edge of the EBS and either make marks down the length or drop a chalk line (snap chalk in the air first to reduce dusting on the EBS). Use this line as a guide for overlapping the next sheet of EBS. Do not overlap less than 6”.
- EBS Seam Tape is supplied with every pallet. There is 1 roll of tape per 1 roll of EBS. (100 lineal feet). The tape is place 3” from the edge of the EBS. Leave the paper backing on until the next step.
- Fold out and overlap the 2<sup>nd</sup> sheet of EBS. Align the edge of the new sheet against the chalk line on the fist sheet. Be sure to pull the new sheet of EBS tight to remove wrinkles.
- Slowly remove the paper backing of the EBS Seam Tape while pressing firmly with the other hand the top sheet against the tape. It is important that the tape makes 100% bond to both sheet sheets of EBS.
- Repeat this process during the entire Evolution installation.
- Inside corners are simply folded. Outside corners are cut in a “V” fashion as with flash coving resilient flooring. Overlap a small piece (larger than the “V” cut on the corner of the wall) of EBS and secure with the EBS Seam Tape. The goal is to maintain a water tight seal at all vertical abutments.

- Roll all seams with either a 100lb roller (as for vinyl installation) or with a hand roller pressing firmly to ensure a tight seal. Double check for proper seal and bonding.
- Control the dust and debris that may collect on the EBS during installation. The EBS seams must be clean and free of dust or other contaminants that will prevent a water tight seam.



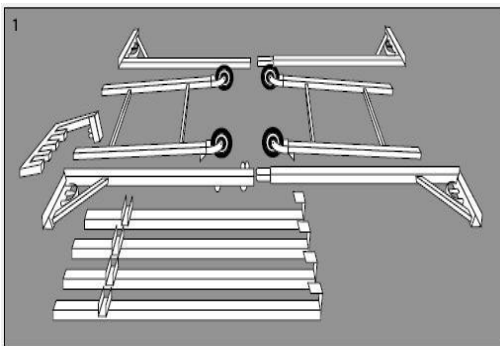
Flash the EBS up the wall approximately 2"-4". Allowing too much excess up the wall will flop down onto the Evolution making installation more difficult.

Make sure the EBS Seam Tape follows up the wall no less than 2".

Once the Evolution is installed, use a plank of Evolution as a guide for trimming the excess EBS. This will leave approximately 1" remaining on the wall which will be covered by the vented base shoe.

### 1.7. SETUP NILSEN KIT

- Setup the Nilsen Kit and prepare for gluing. Follow the instructions included with the kit.
- Watch the training video in its entirety before commencing installation.
- Do not over pressurize the glue canister. Typically, 2 pails of adhesive will fill the glue tank.
- Remember to bleed the air out of the hose before gluing planks.

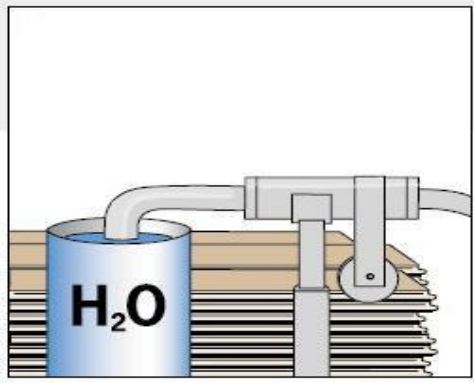




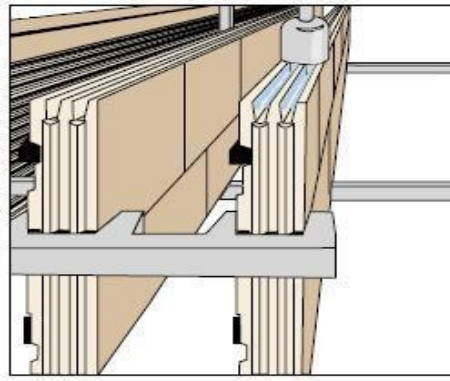
## 1.8. GLUING

- When in use, keep the applicator head immersed in the water container attached to the Nilsen Kit.
- Unpack and stack planks onto the platform no more than 4 rows deep and 3 cartons high.
- When gluing, it is not necessary to apply glue the entire length of each plank. Leave an area approximately ½" away from each end. This will avoid puddling of glue at the corners during installation.
- Maintain a spread rate of 1000 sq ft per 5 liter pail of adhesive. The small 750 mil. hand bottles will cover approximately 200 sq ft per bottle.
- Too much adhesive applied within each groove will prevent the planks from being tapped together tightly.
- The adhesive is fast setting. Do not apply adhesive to planks that are not ready to be installed. If the glue has set, discard the planks and start again.

KEEP APPLICATOR HEAD WET



DO NOT OVER GLUE



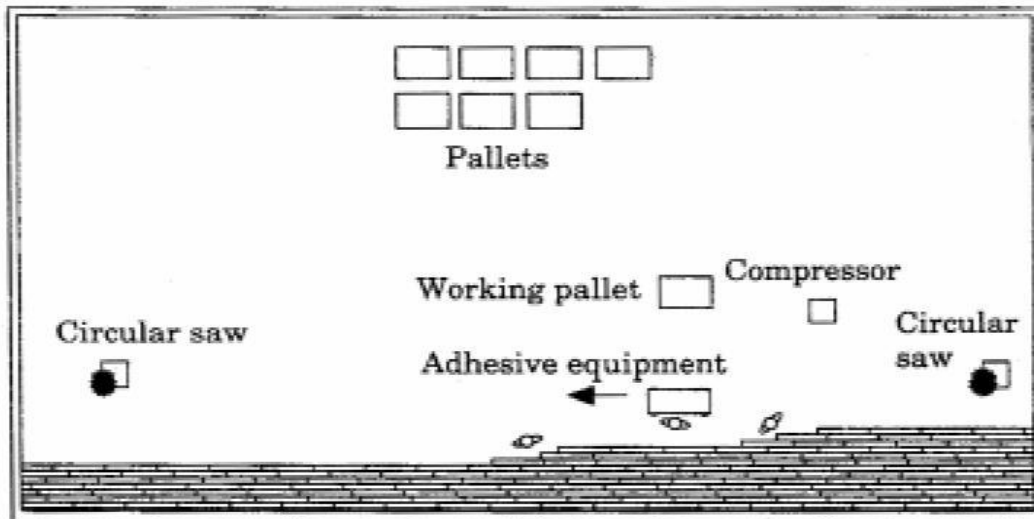
### CAUTION!

Do not over pressurize the glue container. Always release the pressure before opening.



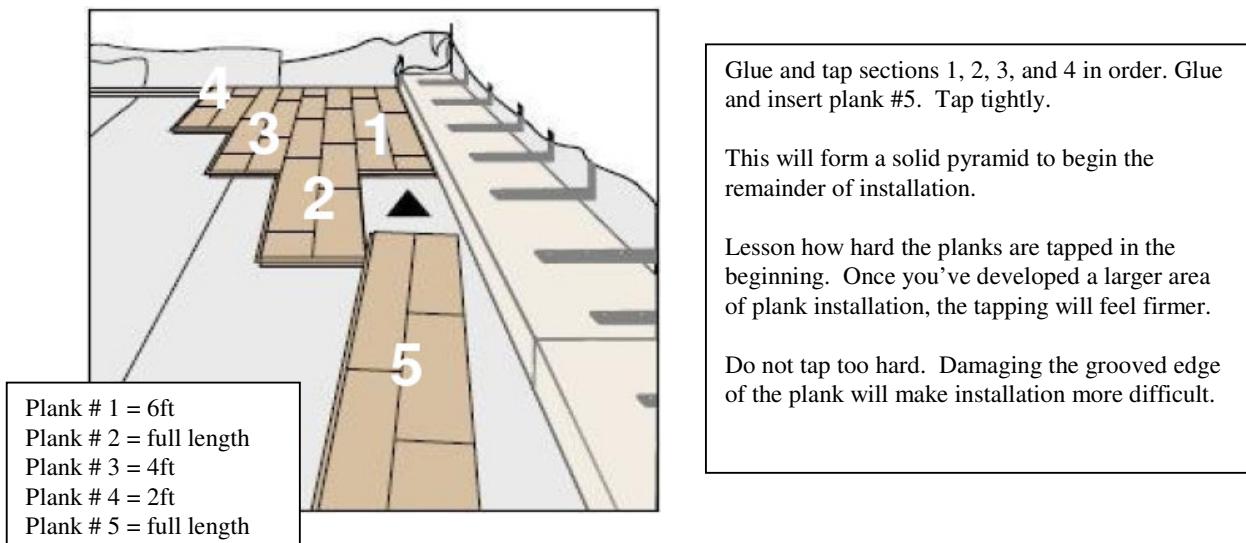
## 1.9. PRODUCTION MANAGEMENT AND GENERAL LAYOUT

- Disperse pallets for the most efficient use of time and energy. See the diagram below. If possible, store the bulk of the pallets near the end of the installation. A fork lift or pallet jack will be necessary to relocate new pallets toward the work area.



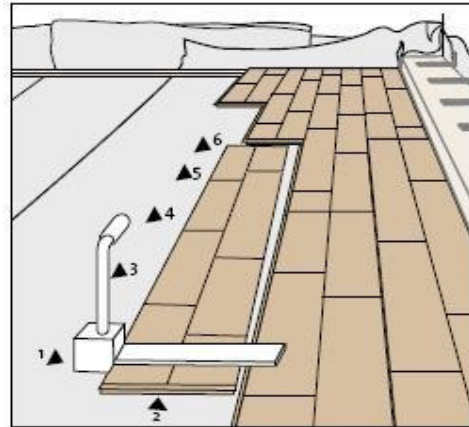
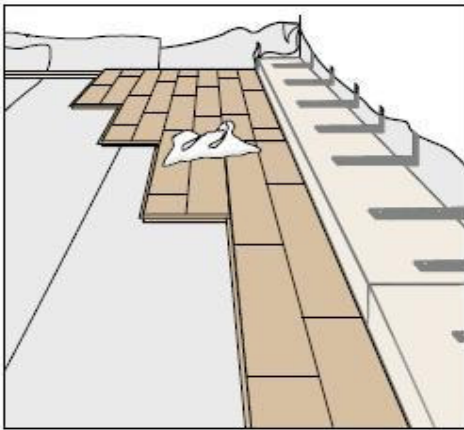
## 1.10. INSTALLATION EVOLUTION

- Pre-cut 1-2 cartons of Evolution down to 2ft, 4ft, and 6ft increments. These will be used as starting planks to develop the proper stagger. Lay out 5 planks. (2ft, 4ft, 6ft, and 2 full lengths). See the diagram below for order of placement.

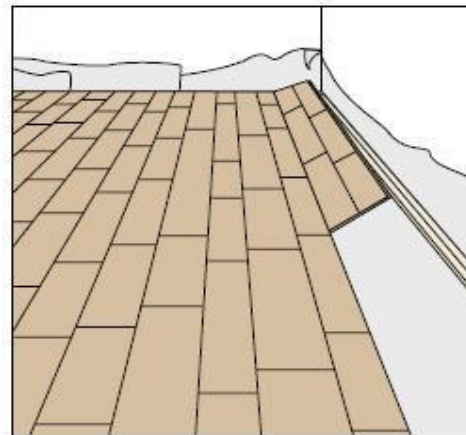
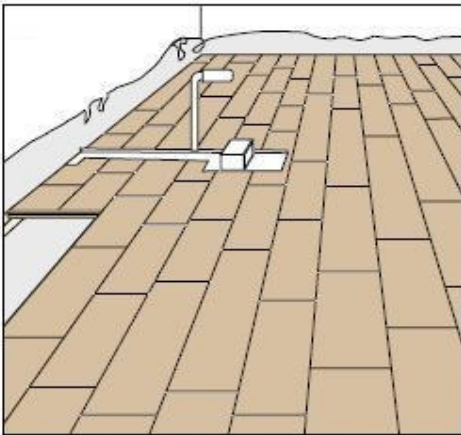


**\*\*\*BE CAREFUL NOT TO PUNCTURE THE EBS DURING INSTALLATION. REPAIR ALL TEARS AND PUNCTURES USING THE EBS SEAM TAPE AND ADDITIONAL EBS AS NECESSARY. EBS MUST REMAIN WATERTIGHT.**

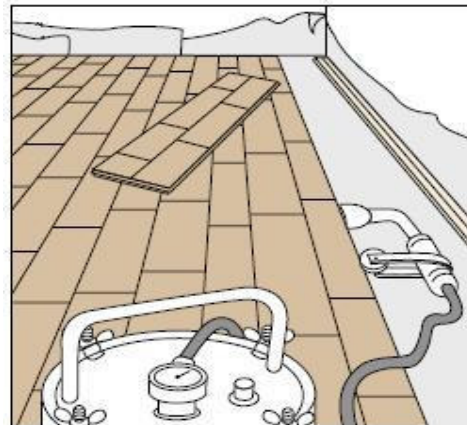
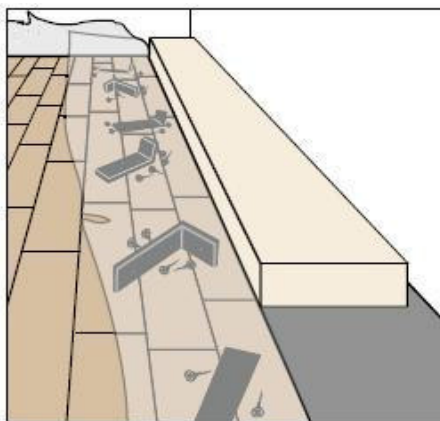
- Maintain a consistent stacking or “pyramid” type installation. Clean all glue overflow with a clean damp towel.
- Tap each plank firmly without damaging the plank. Prior to tapping, align grooves and loose fit starting at the end first and gradually fitting into the length. Tap the end seam first and then tap down the entire length for a smooth tight joint.



- Use the reverse tapping bars to set the planks adjacent to walls. Remember to leave for expansion.

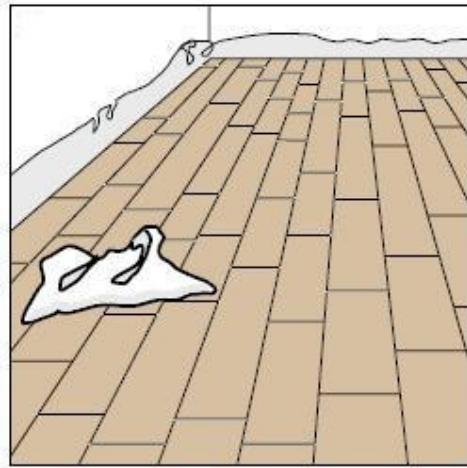
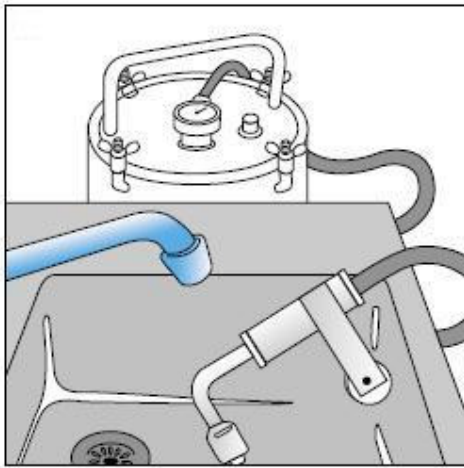


- Maintain a consistent stacking or “pyramid” type installation. Clean all glue overflow with a clean damp towel.



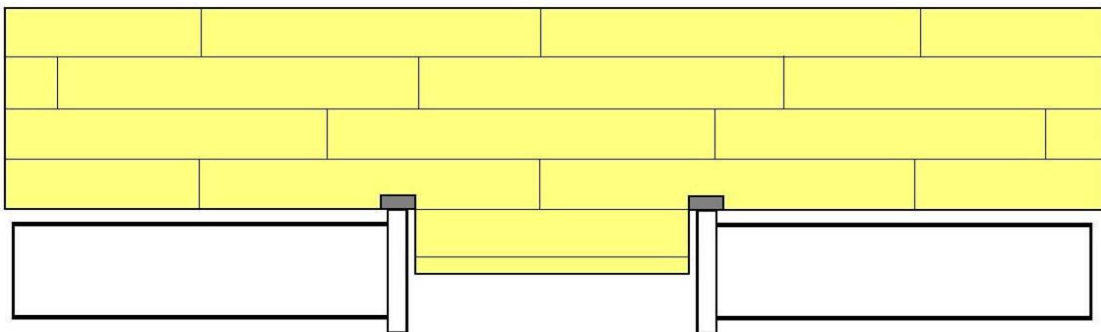
### 1.11. PREPARATION OF EVOLUTION TO RECEIVE TARAFLEX FLOORING

- Once complete, clean hose, glue gun, all tools, and equipment. Remember to clean all residues from the surface of Evolution.
- Trim EBS Barrier so that it rises above the Evolution System no greater than 1 1/4". Use a single plank and guide it along the wall using it as a straight edge to achieve a good result.



### 1.12. PREPARATION OF EVOLUTION TO RECEIVE TARAFLEX FLOORING

- Sand entire surface of Evolution with a rotational sander (buffer) using 80-120 grit sand paper. Move in a fluid motion making sure to not leave chatter marks on the surface. Wear appropriate safety gear such as a dust mask and safety goggles.
- Sweep thoroughly and then vacuum the entire Evolution surface with a commercial grade vacuum cleaner. Restrict traffic to avoid contamination of the installation area.
- Leave appropriate expansion space around all walls, columns, vertical abutments, and door casings.



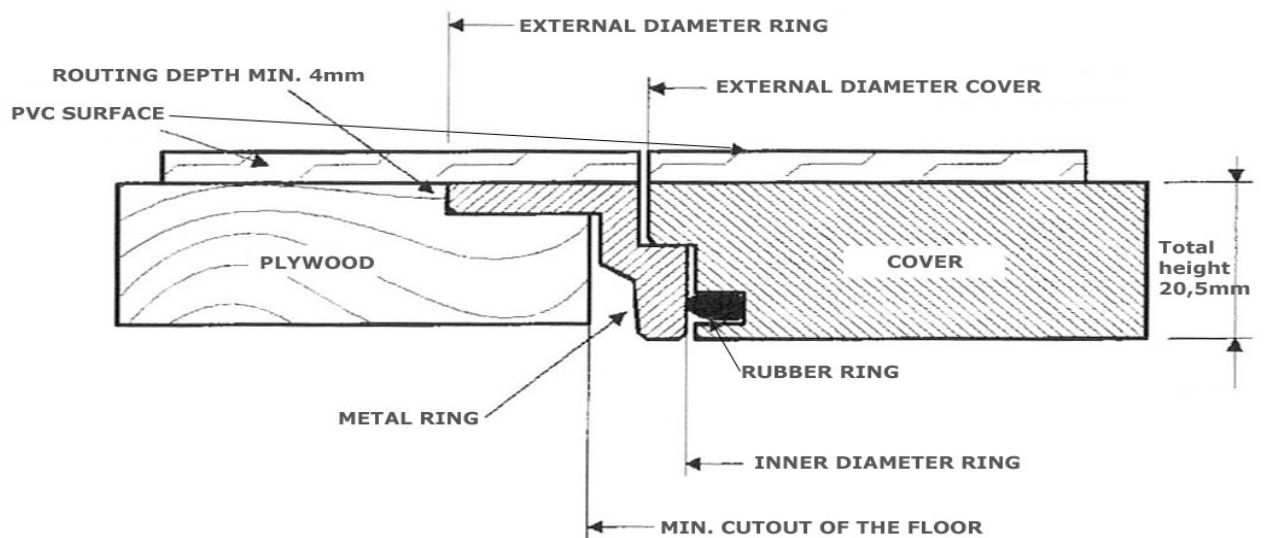
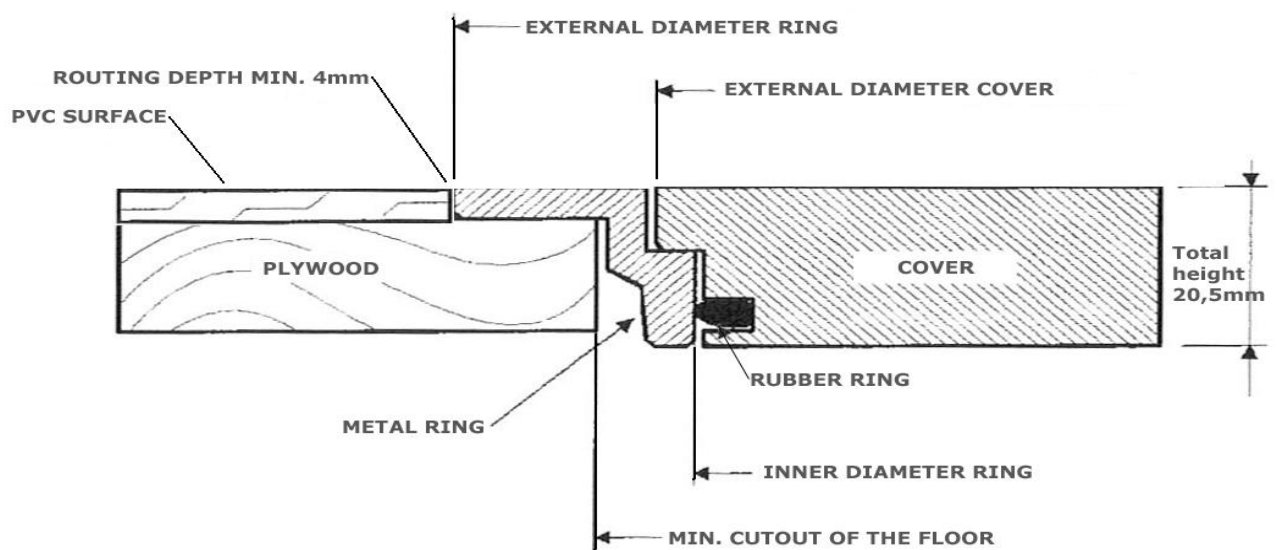
- Fill space between door casing and Evolution with a "Styrofoam" cut to remain flush the surface of the Evolution. This will allow you to install the Taraflex Sport Flooring net to the door casing.

### 1.13. TARAFLEX SPORT FLOORING INSTALLATION

- Follow carefully Gerflor's current technical installation guidelines for the installation of Taraflex Sport Flooring.

### 1.14. TARAFLEX SPORT FLOORING INSTALLATION

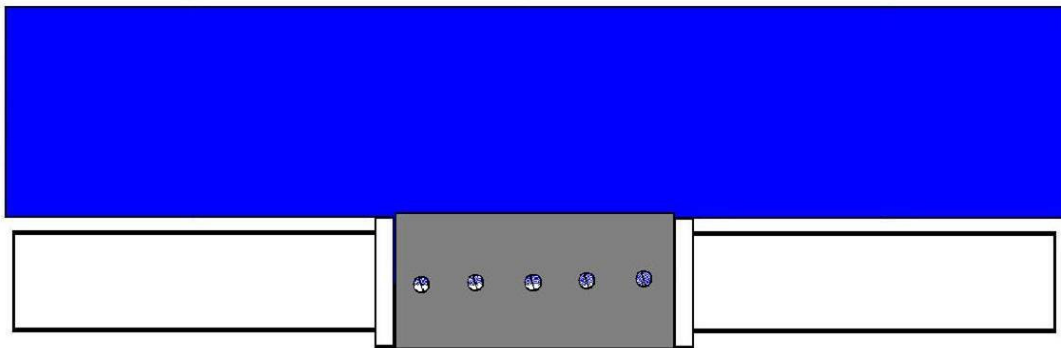
- There are two installation profiles for inserted volleyball sleeves. The approx. 43/4" rings can either be flush mounted for a Taraflex top or can be recessed to allow the Taraflex material to be cut net around the outer ring. See diagrams below.





### 1.15. POST INSTALLATION

- Door transitions or thresholds are treated typically with aluminum ADA compliant ramping products. See PEMKO for more information. [www.pemko.com](http://www.pemko.com)



\*\*\*See Pemko also for waterproof exterior door systems for projects that may require moisture control due to water intrusion from exterior accesses.

- All Evolution projects require the use of Vented Cove Base. Use pre-molded corners when possible.

## 1. Taralex Fitness Tiles

### For Fitness, Multi-Purpose, Weight Rooms, and Athletic Facilities

#### 1.1. STORAGE

Store on clean flat solid surfaces in a controlled environment. Do not store outside.

#### 1.2. PREPARATION OF SUBFLOOR

Subfloor Preparation (General Contractor)

- The General Contractor will supply a smooth, flat concrete finish which will be achieved manually or mechanically. The slab will have a tolerance of + or - 1/8" in a 10' radius. Respect ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring".
- The concrete subfloor will be cured for a minimum of at least sixty (60) days.
- The concrete floor temperature will have to be maintained at a minimum of 65°F (18°C) for one week prior, during, and permanently thereafter the installation. The concrete must be tested according to ASTM F1869 Standard Test Method for Measuring Moisture Evaporation Rate of Concrete Subfloor Using Anhydrous Calcium Chloride. **Slab is not to exceed 8lbs per ASTM F1869.**
- Before proceeding with any work, inspect the subfloor surface and report in writing to the Project Manager and the General Contractor any visible defects on the surface such as cracks, bumps, rough areas or variations in evenness.
- The General Contractor shall patch and repair all cracks, voids and other imperfections of concrete with high strength portland cement based patching materials - Ardex K-15 or equal, approved by the manufacturer. Do not use gypsum based patching materials. If concrete is out of level then it should be properly leveled by an experienced underlayment contractor using cement based material that will provide a minimum of 3,000 psi. compressive strength and sufficiently bound to existing clean concrete surface Ardex K-15 or equal, approved by the manufacturer. After completion of sanding, patching and leveling, vacuum or sweep entire surface of concrete to remove loose dust and dirt before starting the installation of material. Control joints (saw cut) less than 1/8<sup>th</sup> in width do not need treatment.
- Do not bridge resilient flooring over expanding/contracting floor joints. Observe ASTM F710. Use appropriate transition strips where applicable.

#### 1.3. ACCLIMATION OF TILES

- Installation temperature shall be at least 65°F (18°C) maintained for one week prior to and during installation.

#### Material inspection

**Note:** Inspect all TARAFLEX FITNESS tiles carefully to verify that correct colors, patterns and quality have been shipped. Do not install, cut, or fit any material that has visible defects. Material that may have minor edge damage should have such damage trimmed and remove prior to installation of the sheets. Fitness Tiles are sold in batches (dye lots). Do not mix batches.

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#### 1.4. INSTALLING TILES OVER EXISTING FLOORING

- **Over existing resilient**-material must be adhered securely the substrate.
- **Over existing ceramic**-grout lines must be filled level (skimming). Follow appropriate patch manufacturer's recommendations.
- **Over existing carpet**-carpet must be secure. Pile to be no more than 22 ounce loop pile construction.
- **Over existing rubber**-floor must be clean

\*\*\* It is important to respect the original installation's tolerances for moisture, ph, and other conditions that may affect its permanent efficacy. VCT for example once encapsulated may experience a differing nature than before it was covered. Therefore, extra care must be taken to analyze the condition of the original installation and the current slab conditions.

#### 1.5. INSTALLING TILES OVER IN SLAB HEAT SYSTEMS

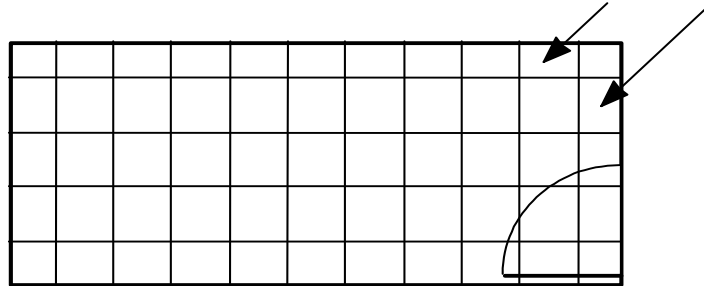
- In all cases, it is necessary to respect the drying time of the slabs.
- Before laying the flooring, the heating installation must have been operating for around 4 weeks in order to stabilize the sub floor with the correct moisture content for its proper functioning and to prevent steam rising once the floor is in use.
- Trained technicians who can check the thermal rate and correctly stabilize the ultimate temperature must carry out the start-up operation of the heating installation.
- This ultimate functioning temperature must be reached at least 8 days before the flooring is laid and continuously maintained until reaching the degree of dryness recommended for the sub floor.
- The heating must be stopped 48 hours before starting the laying operation (treatment of cracks and joints, primer, skimming/patching, installation of the flooring) and not restarted until at the least 72 hours after installation.

#### 1.6. TILE LAYOUT

- Mark the center starting line. Finished installation should be square to the room.
  - Lay the first length of Taraflex along this chalk line and then work progressively outward, leaving a small gap (1/4" minimum) between the sheets to allow the material to relax for at least 24 hours.
  - Tiles should be positioned so that the perimeter cuts are equal (< or equal to ½ tile).
  - Avoid small cuts in entrances and high traffic areas (> ½ tiles).
  - This may mean that the first row of tiles is installed on or over the center line.
  - Install tiles in the same direction, using the directional arrows placed on the back of each tile.
  - **The tiles are batched, do not mix the batches.**
-

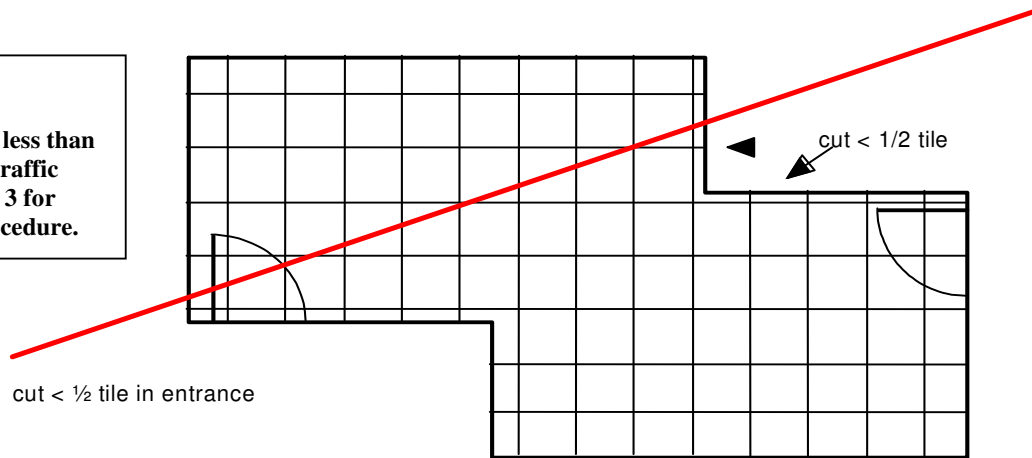
## 1.SETTING OUT

Equal cuts at the perimeter .

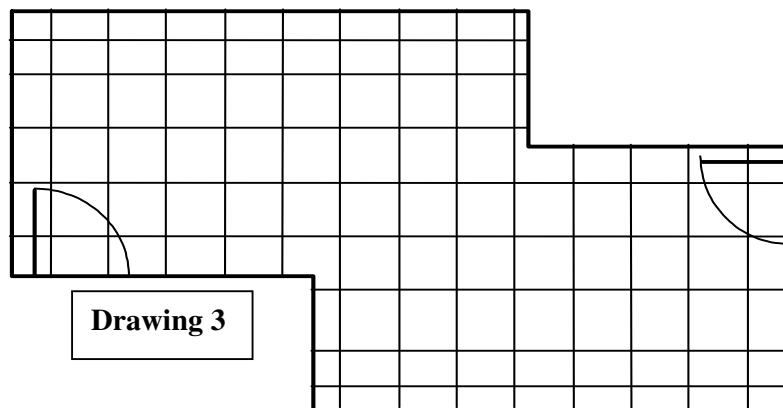


### **Poor setting out:**

**Leaves cut tiles of less than  $\frac{1}{2}$  tile in the high traffic area. See drawing 3 for correct layout procedure.**



3- Change of layout:  
Cut > or equal to  $\frac{1}{2}$  tile positioned in the areas of highest traffic



**Drawing 3**

## 1.7. EXPANSION SPACING

- Leave an expansion space along the perimeter. Add 1/16" for every 6 feet (3 tiles) in each direction. For example: A 24'x36' room will require a 1/4" space at the width end (24") and a 3/8" space at the length end (36ft)
- In areas exposed to direct sunlight e.g. in front of shop windows, the gap should be at least 3/8".

## 1.8. METHOD OF TAPPING

- Each lug (interlocking edges) must be tapped flush using a non-marking synthetic mallet (white). For tile installations over existing cushioned flooring, it may be necessary to use a non-marking "dead blow" mallet. Be careful not to damage tile during the tapping of the interlocking joints. Dead Blow type mallets work well with "over existing surface" installations. Be careful to not hit the tiles too hard.

## 1.9. TOOLS

- Knife, tape measure, straight edge, jig saw, synthetic mallet, chalk line and/or laser guide. Mallets are to be non-marking white rubber, or non-marking Dead Blow type. Do not forget the safety equipment that you will need. (safety goggles, ground fault interruptors for power tools, etc).

## 1.10. CUTTING METHODS

- Straight cuts can be done with a knife. Cut through the upper surface (one or two passes) and then break along the cut.
- Shapes can be cut using a jig saw (wood blade)
- Tiles can be heated and cut for irregular shapes. Be careful not to damage the tile.

***Caution! Follow tool manufacturer's guidelines for safety and use. Wear proper safety equipment.***

## 1.11. ADHERED INSTALLATIONS

- The tiles can be stuck down, using Gerflor's recommended polyurethane adhesive.
  - In entrance to store room
  - In entrance doorways
  - On ramps / sloped surfaces (check ADA requirements for slope/ramping compliance)  
Tile may have to be heated for form fit beginning/end of ramp slope.

\*\*\* Use only Gerflor's recommended urethane adhesive. Adhere using a 1/32" V Notched Trowel. Follow typical gluing methods as outlined in the Full Spread Installation Guidelines for Taraflex Resilient Sheet Flooring.

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## 1.12. TYPES OF BASE

- Rubber or Vinyl base as normally practiced. Use “toe” base only and place tightly against the surface of the tile. For areas where the expansion spaces exceed the covering ability of the base, use an extended toe resilient base.
- Wood trim (natural, varnished or painted)

## 1.13. EXPANSION/CONTRACTION JOINTS

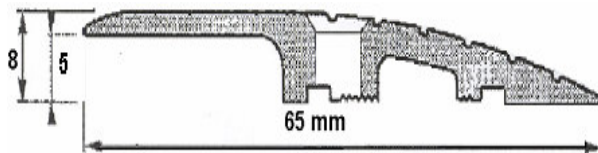
- Use a flush fixing moveable joint and hot weld the tiles to each side
- Cut the tiles each side of the joint and use a cover strip fixed on one side only.

\*\*\*There are numerous transitioning stripping systems available. See Pemko @[www.pemko.com](http://www.pemko.com) for more details.

## 1.14. THRESHOLDS AND TRANSITIONS

- • In heavy traffic, high moisture doorways, a metal mechanically fixed section must be used. (See Pemko Product Catalogue for suggestions.)
- For lower traffic intensity doorways, not subject to moisture an adhered PVC section can be used.

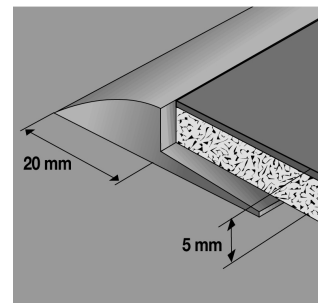
**Pemko Profile**



**Heavy traffic or wet areas**

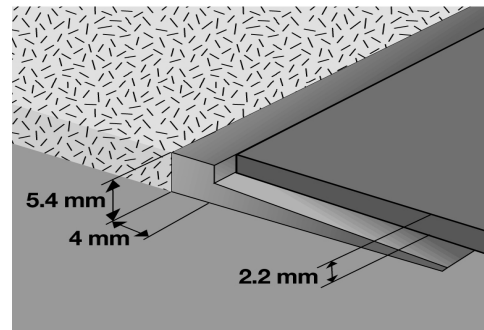
**Or**

**Resilient Profile**



**Low traffic**

- **Joining to adjacent floor covering**
  - Depending on the flooring to be met, use an adapting taper profile.



### **1.15. JOINING TILES OF DIFFERENT COLORS**

- Two methods:
  - Simply join tiles using existing interlocking lugs/edges (strongest method).
  - For curved or straight joints requiring a cleaner looking line, cut the tiles then hot weld. (most aesthetic method).

### **1.16. PUTTING INTO SERVICE**

- Floor can receive traffic immediately after installation.
- Prohibit the use of equipment or fittings with rubber feet. **Do not use rubber mats.**

### **1.17. REPAIRS**

- If a tile is damaged:
  - Cut through one of the corner dovetail lugs (interlocking edges).
  - Remove the lug and lift out the tile.
  - Replace with a new tile noting the installation direction.

### **1.18. UPON COMPLETION OF INSTALLATION**

- Inspect entire project for visual imperfections.
  - Double check all heat welds for correct quality. Repair all imperfections prior to leaving the project.
  - Ensure all exposed vertical abutments such as door jambs are cut tightly (net) and sealed with a water proof sealant such as clear silicone or equivalent.
  - At all unbased abutments such as pipes pole inserts, the material must be cut neatly and cleanly to form a tight, net fit. Any gaps must be repaired or filled with a permanent waterproofing sealant.
-

## **1. PERMANENT INSTALLATION FULL SPREAD ADHERING TARAFLEX LOCKER**

### **1.1. ROLLS SHOULD BE STORED UPRIGHT AT ALL TIMES**

Store on clean flat solid surfaces in a controlled environment. Do not store outside.

### **1.2. PREPARATION OF SUBFLOOR**

Subfloor Preparation (General Contractor)

- The General Contractor will supply a smooth, flat concrete finish which will be achieved manually or mechanically. The slab will have a tolerance of + or - 1/8" in a 10' radius. Respect ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring".
- The concrete subfloor will be cured for a minimum of at least sixty (60) days.
- The concrete floor temperature will have to be maintained at a minimum of 65°F (18°C) for one week prior, during, and permanently thereafter the installation. The concrete must be tested according to ASTM F1869 Standard Test Method for Measuring Moisture Evaporation Rate of Concrete Subfloor Using Anhydrous Calcium Chloride and/or ASTM F2170 "Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using *In-Situ* Probes". Slab is not to exceed 5lbs/1000 sq ft/24 hrs per ASTM F1869 and not to exceed 75% RH per ASTM F2170.
- Before proceeding with any work, inspect the subfloor surface and report in writing to the Project Manager and the General Contractor any visible defects on the surface such as cracks, bumps, rough areas or variations in evenness.
- Check for grease, oil, paint, dust or any contamination remaining on the concrete subfloor.
- Before proceeding with the TARAFLEX material installation, clean the concrete surface to remove any dirt or foreign materials. Sanding of the subfloor is mandatory. It may be necessary to scarify or bead-blast concrete surface to remove existing adhesives, paint or other surface applied materials.
- The General Contractor shall patch and repair all cracks, voids and other imperfections of concrete with high strength portland cement based patching materials - Ardex K-15 or equal, approved by the manufacturer. Do not use gypsum based patching materials. If concrete is out of level then it should be properly leveled by an experienced underlayment contractor using cement based material that will provide a minimum of 3,000 psi. compressive strength and sufficiently bound to existing clean concrete surface Ardex K-15 or equal, approved by the manufacturer . After completion of sanding, patching and leveling, vacuum or sweep entire surface of concrete to remove loose dust and dirt before starting the installation of material.
- Do not bridge resilient flooring over expanding/contracting floor joints. Observe ASTM F710.

### **1.3. UNROLLING FLOORING MATERIAL**

- Installation temperature shall be at least 65°F (18°C) maintained for one week prior to and during installation.
- Mark the center starting line. Finished installation should be square to the room.
- Lay the first length of Taraflex along this chalk line and then work progressively outward, overlapping slightly each sheet for seaming. Be sure to align the raised buttons for proper pattern matching.

#### **Material inspection**

**Note:** Inspect all TARAFLEX sheets carefully to verify that correct colors, patterns and quality have been shipped. Do not install, cut, or fit any material that has visible defects. Material that may have minor edge damage should have such damage trimmed and remove prior to installation of the sheets.

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### General installation

TARAFLEX LOCKER can be installed lengthwise or widthwise depending upon seam management, patterns, borders, and etc. Layout flooring to reduce the number of seams.

## 1.4. LOOSE FITTING OF FLOORING MATERIAL

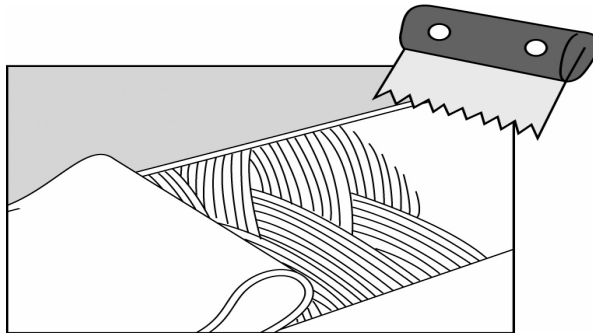
- Overlap seams slightly.
- Trim material 3"- 4" approximately up each wall.

## 1.5. ADHESIVES

### 1.5.1. METHODS

#### ACRYLIC GLUING-UP TO **5LBS** PER ASTM F1869

- Use only a Gerflor approved adhesive.
- Respect the guidelines indicated on the pail of adhesive.
- Recommended trowel gauge:
  - For Porous Substrates -1/16" x 1/16" x 1/16" square notched.
  - For Nonporous Substrates – 1/32" x 1/16" x 1/32" V notched.
- To assure uniform adhesion of the entire surface, only spread a workable amount of adhesive at one time.
- Maintain a uniform spread rate. Replace trowel (or trowel blade) with every pail spread.
- ***Immediately after troweling the adhesive onto the concrete use a medium napped paint roller saturated with adhesive to flatten out visible trowel marks.***
- "Open" and "Working" times are dependent upon porosity of the substrate, temperature, and humidity. It is important that the installer familiarize themselves with the adhesive before commencing actual installations. Insufficient open time for acrylic glue will cause bubbling. Too long of an open time will result in poor adhesive transfer.
- Monitor temperature and humidity during installation.
- Once material is placed into the adhesive, immediately roll thoroughly with a 100 lb (minimum) roller.
- Prohibit traffic for a minimum of 48 hours after placement into the adhesive.
- At all floor drains and other vertical protrusions that may be subject to water intrusion, spread a 3"- 4" bed of urethane adhesive around the perimeter of the drain or protrusion. Drain lips should finish flush with the surface of the flooring.





**POLYURETHANE METHOD UP TO 5 LBS PER ASTM F1869**

**FOR AREAS RECEIVING HIGHER TOPICAL MOISTURE**

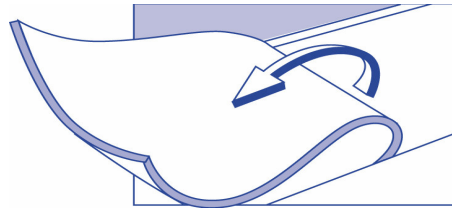
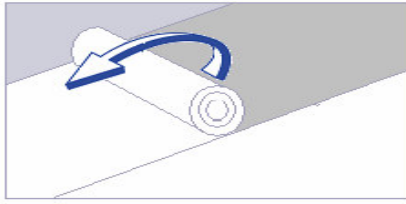
- Use only a Gerflor approved adhesive.
- Respect the guidelines indicated on the pail of adhesive.
- To assure uniform adhesion of the entire surface, only spread a workable amount of adhesive at one time.
- Recommended trowel gauge: Only use a 1/32" x 1/16" x 1/32" trowel.
- Prior to full spread adhesion, it is recommended that an adhesion test be carried out on a small area.
- Before spreading the adhesive, stir the adhesive with a low speed mechanical mixer for approximately 2 minutes. Be sure to mix completely. This will make the adhesive easier to spread and in ensures proper uniform consistency.
- All urethane open times are dependent upon humidity, temperature, and/or the addition of a catalyst such as found with 2 part epoxies. Installers should familiarize themselves with the adhesive prior to application on an actual project.
- Adhesive is a "wet" set. Trowel marks should either be "knocked down" or greatly reduced upon rolling. Back rolling the adhesive with a medium napped paint roller saturated with the adhesive will remove the trowel marks completely and it may expedite the open time in low humidity conditions. (1 part urethanes)
- Monitor temperature and humidity during installation.
- Once material is placed into the adhesive, immediately roll thoroughly with a 100 lb (minimum) roller.
- Avoid adhesive displacement by restricting traffic. Use knee pads that disperse weight evenly and on a flat plane. (such as ProKnee) Otherwise, use flat panels to place your knees and feet during trimming or etc.
- Prohibit traffic for a minimum of 24 hours after placement into the adhesive.

**1.6. LAYING PROCEDURE**

- Start from the center line and working outward.
- Position the first half of the sheet (or sheets) into the adhesive, and then repeat this procedure with the second half. Do not leave a partial roll of material unadhered while the other side's adhesive sets. This will help to avoid telegraphing of glue lines. To reduce potential bubbling during installation, it is recommended to roll the material into the adhesive. Keep the roll tight while placing into the adhesive. Keep the slack out of the roll aids in keeping even pressure across the width of the roll improve resistance to bubbling. If this approach is used, do not pre-cut the material. It will need to be left long and trimmed after placement. The fold back method is acceptable, but care must be taken to not move too quickly. Pushing the material back into the adhesive too fast may engulf air and create more effort needed to remove bubbles. Do not flop rolls back into adhesive.
- Continue laying sheets by overlapping and double cutting through both sheets using a straight edge, trace cutting, or scribing. The goal is to produce a uniformly spaced seam for welding. Leave a 1mm gap at the seam. This is approximately the width of a credit card.
- Always double check the installation while gluing with the lights on and off. The use of light and shadow can help with determining bubbles and/or other imperfections.

**ROLL BACK METHOD**

**FOLD BACK METHOD**



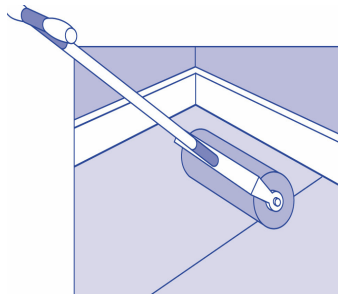
**DO NOT “FLOP” MATERIAL BACK INTO ADHESIVE**

## **1.7. ROLLING**

### **1.7.1. ACRYLIC GLUING**

- Manually: immediately after material is positioned onto the adhesive as necessary. Using a 100 pound (minimum) flooring roller, roll the entire surface in both directions.

**\*\*The use of knee pads by Pro Knee are highly recommended. They offer strong protection to the installer and decrease the possibility of adhesive displacement. [www.proknee.com](http://www.proknee.com)**



### **1.7.2. POLYURETHANE METHOD**

**Note:** Rolling is done in multiple stages

- First manually remove visible bubbles with a piece of cork or a wooden board wrapped in carpet or similar material. Be careful not to displace the adhesive. Use plywood or other flat material that will disperse the installer's weight. It is recommended; until the adhesive is completely dry, to walk on the floor using plywood or similar product. Bubbles must be removed before adhesive becomes hard set.



- Second, roll the floor 2 hours later using a 100 lb minimum roller. Last final rolling is done 1 hour later.
- Cross seams may need to be weighted to avoid “cupping”. Use weight that will not leave permanent indentation due to adhesive displacement.

## **1.8. SEAMING OF JOINTS (HEAT WELDING METHOD)**

### **1.8.1. HAND ROUTING:**

The use of a straight edge and hand groover, with care, will provide good results. Maintain a uniform width and depth of groove for a uniform welded seam.



WDD 758 PULL GROOVER ARM BENT



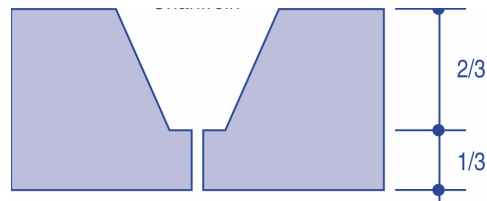
WDD 15 HAND GROOVER (PUSH - PULL)

\*\*\*Seams will be placed in the middle between the raised buttons.

➤ **TARAFLEX LOCKER-CHEMICAL WELDING IS NOT RECOMMENDED**

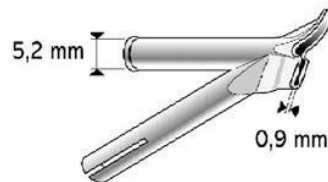
A. NON FOAM BACKED SHEET.

Rout to  $\frac{3}{4}$  of total thickness



1.8.2. MANUAL WELDING:

- This must be done with a heat welding gun with variable temperature control and a speed weld nozzle by Leister Equipment Company, Steinel, or equal approved by manufacturer.
- Nozzle size is 5 mm. Use only the Leister Speed Tip #105433 (Winkelman's number is WDD722). Keep tip perfectly vertical. Tilting from side to side will result in a uniform weld.



- Avoid forcing welding rod into the seam to ensure a satisfactory finish.
- For all types of welding equipment, observe manufacturer's instructions, particularly with regard to speed of welding.

\*\*\* In both installation types, do not heat weld resilient flooring for a minimum of 24 hours after the material has been placed into the adhesive.

\*\*\* Respect ASTM F1516 "Standard Practice for Sealing Seams of Resilient Flooring by the Heat Weld Method.

**1.8.3. FINISHING (SEAM SKIVING)**

Trimming is done in two stages once the welding rod and material have completely cooled.

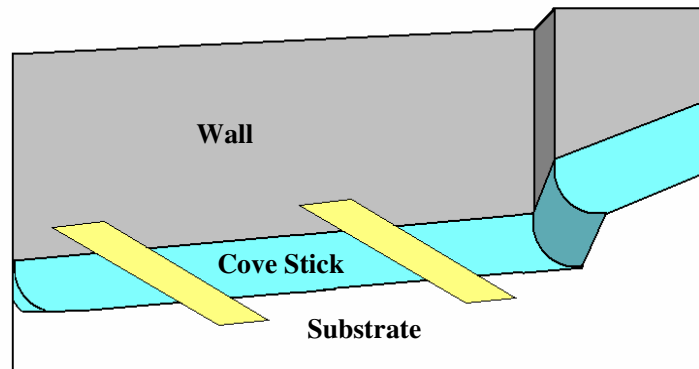
- Trim flush with the floor using a slim trim skiving knife.
- After the welding rod is trimmed smooth or flush with the top surface, check the entire seam to ensure that the welding cord is bonded properly and is flush with the top wear layer.



**WDD 645 SLIM TRIM KNIFE**  
**WITH SPECIAL DIAMOND SHARPENING PAD**  
**GREAT ON RAISED KNOB AND ANTI SLIP FLOORS**

#### **1.8.4. FLASH COVING ALSO KNOWN AS INTEGRAL COVE**

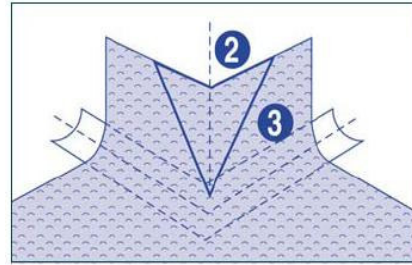
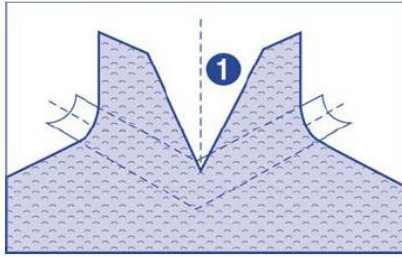
- Metal cap is preferred over vinyl. Capping can be attached to the wall with either contact cement or with foam stick tape. It may be necessary to prime the wall with contact adhesive or primer prior to placement of the foam tape. Miter all corners cleanly.
- Use standard cove stick (11/8" typical). Cove stick and be attached with contact cement or by taping as shown below. Use 3/4" masking tape placed at an angle. Small pieces will have to be attached with adhesive. Space tape approximately every 12". Lap tape up the wall and onto the floor approximately 1".



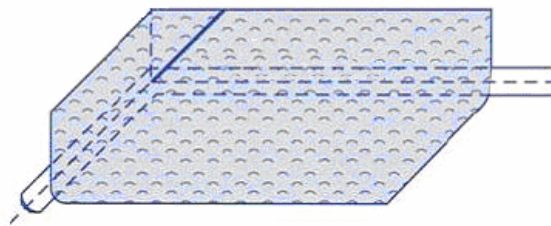
- Taraflex Locker can be either pattern scribed or cut in by hand. Care must be taken with "free handing" with accuracy of cuts. Flooring is cut into the metal cap by scribing typically.
- Outside corners are formed using the "butterfly" method. This is a stronger approach to outside corners and eliminates the need for a "boot".

Cut "V"

Install pre-cut or scribe cut insert.



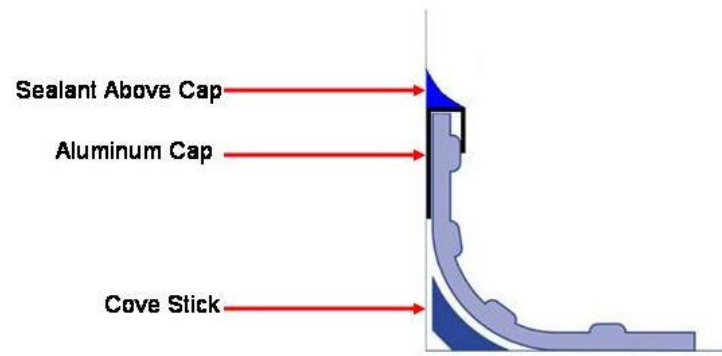
- Inside corners are typically cut at a 45 degree angle as shown.
- Corners and straight walls are adhered with Gerflor's recommended Flash Cove Adhesive. For dusty walls, it may be necessary to apply to coats. Coat wall entirely and overlap past the cove stick and onto the substrate approximately 1"-2". It is best to apply this adhesive prior to the spreading of the floor adhesive. Apply the flash cove adhesive with a 2" – 3" soft paint brush.
- Outside corners must be set as a "contact" type bond. Before placing the insert, paint the back of the insert with flash cove adhesive and allow to tack. Set insert. It may be necessary to apply mild heat in order to shape the material.



- ALL INSIDE AND OUTSIDE CORNERS ARE HEAT WELDED

#### 1.8.5. UPON COMPLETION OF THE INSTALLATION

- Visually inspect entire project for visual imperfections.
- Double check all heat welds for uniformity. Repair all imperfections prior to leaving the project.
- Ensure all exposed vertical abutments such as door jambs, pipes, shower entrances, and etc. are cut tightly (net) and sealed with a water proof sealant such as clear silicone or equivalent.
- At all unbased vertical abutments such as drains and shower entrances, the material must be cut neatly and cleanly to form a tight, net fit. It is recommended to apply a small 3"- 4" band of urethane adhesive around all drains when using the acrylic gluing method to help protect from water intrusion during maintenance. Any gaps must be repaired or filled with a permanent waterproof sealant.
- Inspect all welds for smoothness and tightness to each side of the seam. A proper weld will be complete (with no gaps) on either side. Repair poor welds before leaving the project.



## **1. BLEACHERS and ROLLING LOADS ON TARAFLEX SPORT FLOORING**

### **1.1. ON CONCRETE SUBFLOOR (FOAM BACKED MATERIALS)**

- Most bleacher models can be upgraded to accommodate lower PSI load requirements. See bleacher manufacturer for details. Respect the PSI load limitations of the flooring.
- Typically, 10 row high bleachers and below are acceptable with a direct glue down installation. However, it is required to respect both STATIC and DYNAMIC load limitations of the flooring to be installed. Follow guidelines regarding installation taking special note of the adhesives used. Respect the following:
  - Use Gerflor's recommended urethane adhesive either along the entire length of wheel path, or the entire bleacher area from the adjoining wall to the end of the bleacher when fully extended. It may be easier to apply the latter method of full adhering under the entire bleacher area.

### **1.2. ISOLSPORT INSTALLATIONS**

- With Isolsport Installations, it is mandatory to adhere the Isolsport to the slab with Gerflor's recommended urethane adhesive along the wheel's path from completely closed to fully extended to avoid creeping. No acrylic adhesive will be used with Isolsport and projects with bleachers.
- Spread approximately an 18"-24" band of adhesive depending on the wheels' path and design. The goal is to create a solid base secured to the slab along each wheel's path to avoid creeping of the Sports Flooring.

### **1.3. HIGHER BLEACHER LOADS (BELOW 700 PSI BUT ABOVE CURRENT LIMITS)**

- A solid PVC underlayment system has been developed to accommodate higher bleacher loads using Taraflex Surface. Installation instructions will be provided on a job by job basis. Thicknesses of the PVC underlayment can be adjusted to accommodate the adjoining height of Sport M Plus and Performance Plus. Although comfort is diminished due to the lack of foam backing at the bleacher location, a uniform appearance can be achieved with this method. Contact the Gerflor Taraflex Technical Department for more details.
- **EVOLUTION** incorporates the use of a floating plied substructure with Taraflex Surface installed on top. Multi Use 3.0, Multi Use 5.0, Sport M Plus, and Performance Plus will fall under the category for direct glue installations of foam backed products.

### **1.4. ON EXISTING HARDWOOD FLOORING**

- **Each installation involving existing Hardwood Flooring installations must be evaluated by the contractor on a case by case basis.**
-

### **1.5. ON POURED URETHANE FLOORS**

For a renovation job over an existing poured urethane floor, the existing urethane's cushion combined with cushion from the Taraflex foam will increase indentation. Bleacher loads should be reduced to no more than 75 PSI depending upon the surface it is installed over, this limit may need to be reduced further, protect of the Taraflex on the surface with plates, or incorporate the two systems outlined below for higher bleacher loads. A small test will help determine action. This applies also to other types of rolling loads such as cafeteria tables, roll out tables, and etc.

### **1.6. ON PERMANENT INSTALLATION USING ISOLSPORT**

Apply adhesive over the surface under the bleachers or straight under casters and / or wheels location to prevent sliding of the ISOLSPORT that could be caused by the movement of the bleachers. Do not use acrylic adhesives to attach Taraflex to Isolsport in applications involving Bleachers.



## **1. COURT LAYOUTS**

(cf. **ATHLETIC BUSINESS - Special Buyers Guide - February 2002**)

The information contained in this guide, based on information provided by various associations and governing organizations, is intended merely as a guide and is not applicable to all situations. Contact the appropriate organization for further information.

### **Professional Basketball Courts**

National Basketball Association  
Olympic Tower  
645 Fifth Ave.  
New York, NY 10022  
[www.nba.com](http://www.nba.com)

### **College and High School Basketball Courts**

National Collegiate Athletic Association  
700 West Washington Street  
P.O. Box 6222  
Indianapolis, Indiana 46206  
[www.ncaa.com](http://www.ncaa.com)

### **Volleyball Courts**

USA Volleyball  
715 South Circle Drive  
Colorado Springs, CO 80910  
[www.usavolleyball.org](http://www.usavolleyball.org)

### **Badminton**

United States Badminton Association  
One Olympic Plaza  
Colorado Springs, CO 80909  
(719) 578-4808  
[www.usabadminton.org](http://www.usabadminton.org)

### **Tennis**

American Sports Builders Association  
8480 Baltimore National Pike, #307  
Ellicott City, MD 21043-4547  
[www.ustctba.com](http://www.ustctba.com)

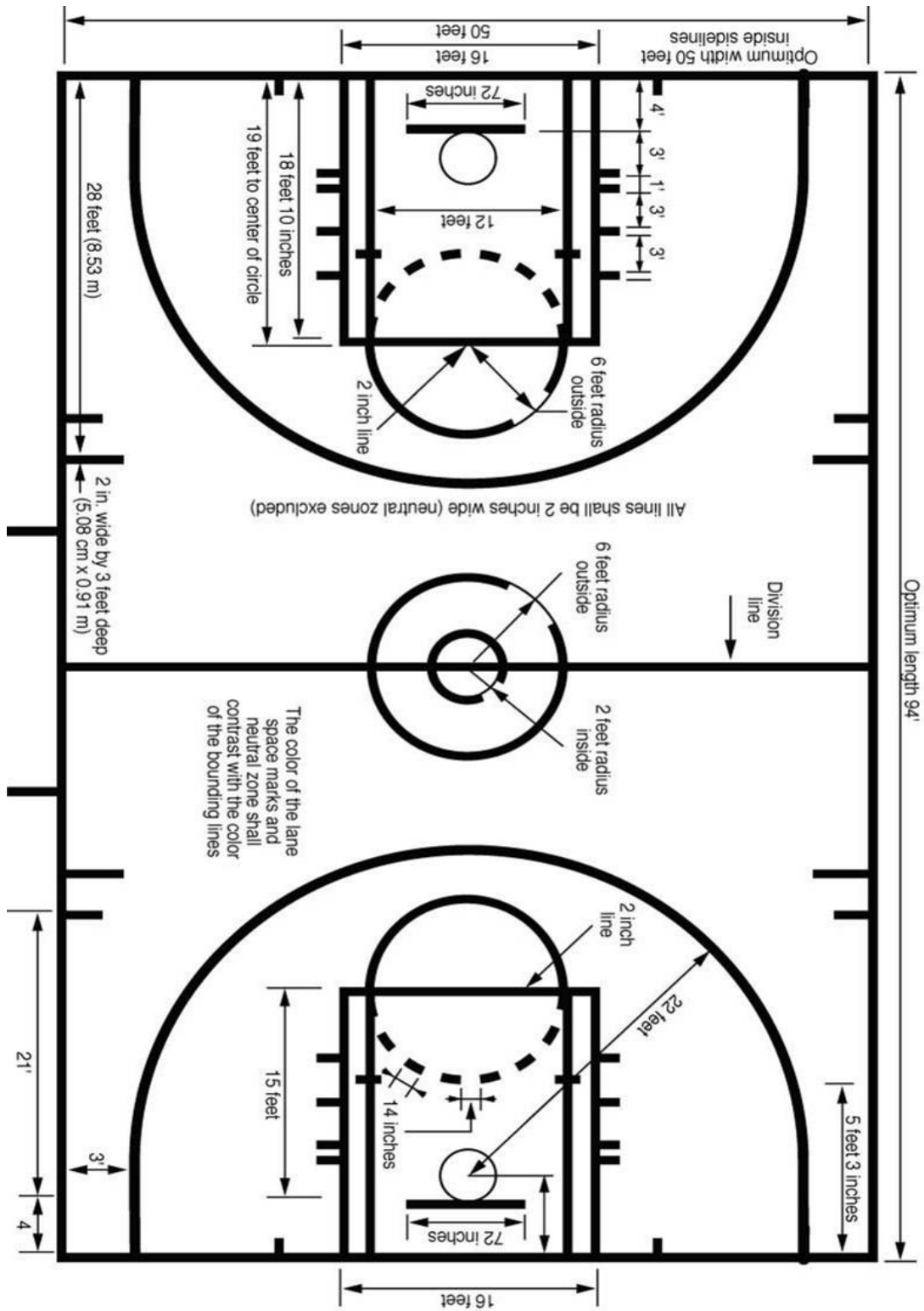
United States Tennis Association

Regional Locations can be found at:

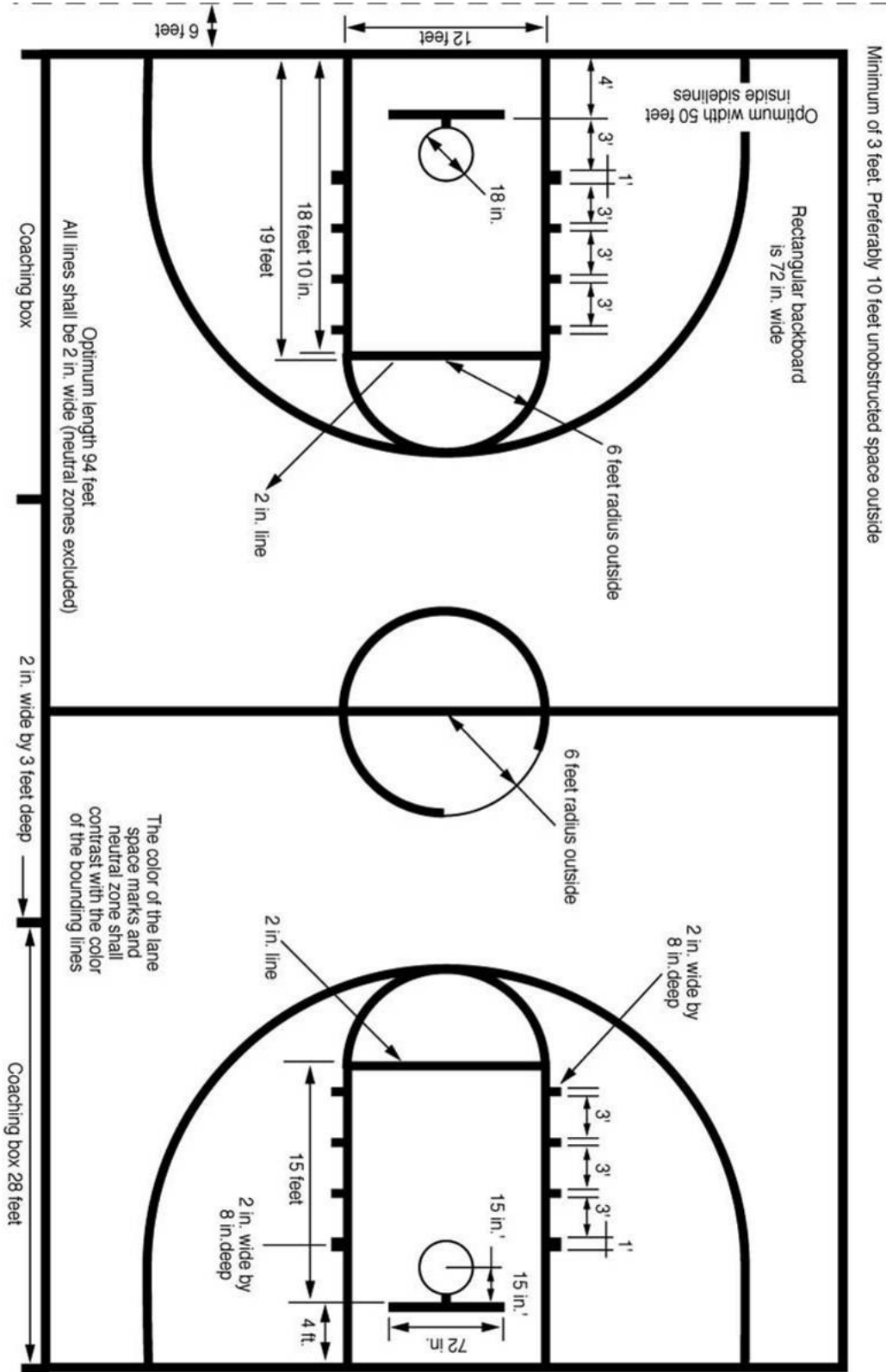
[http://www.usta.com/site\\_services/custom.sps?iType=961&icustompageid=6107](http://www.usta.com/site_services/custom.sps?iType=961&icustompageid=6107)

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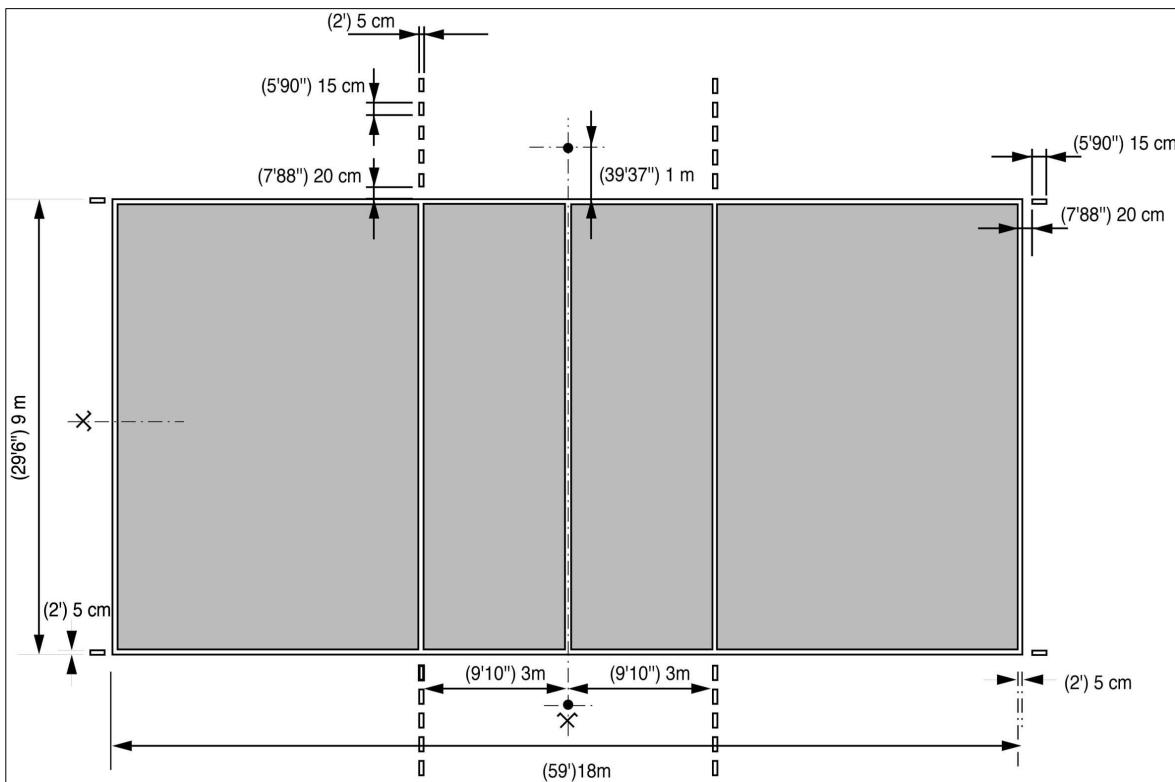
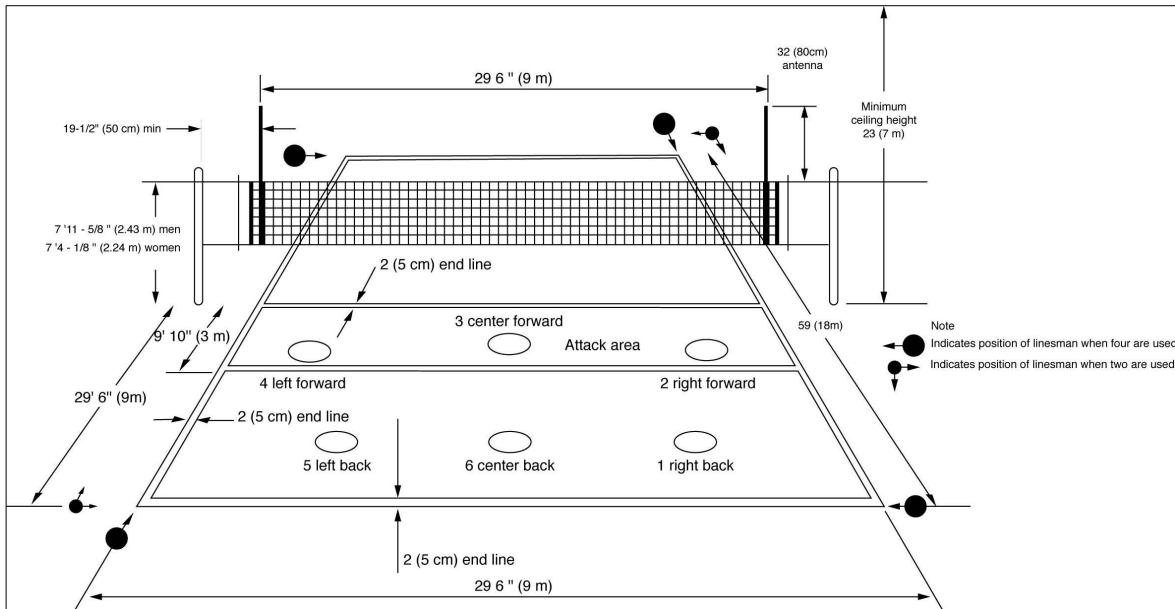
# BASKETBALL PROFESSIONNAL COURT



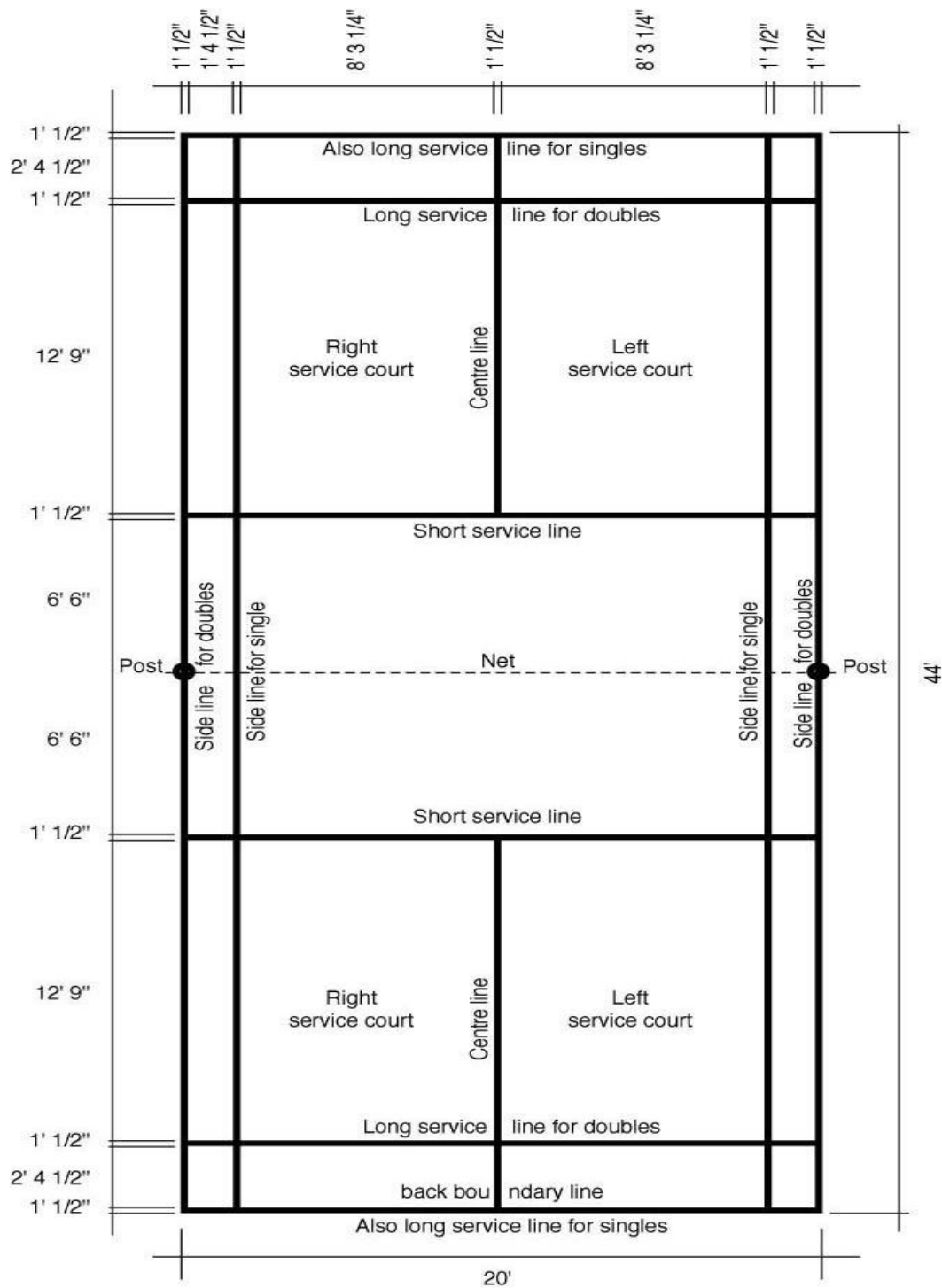
BASKETBALL High School and College



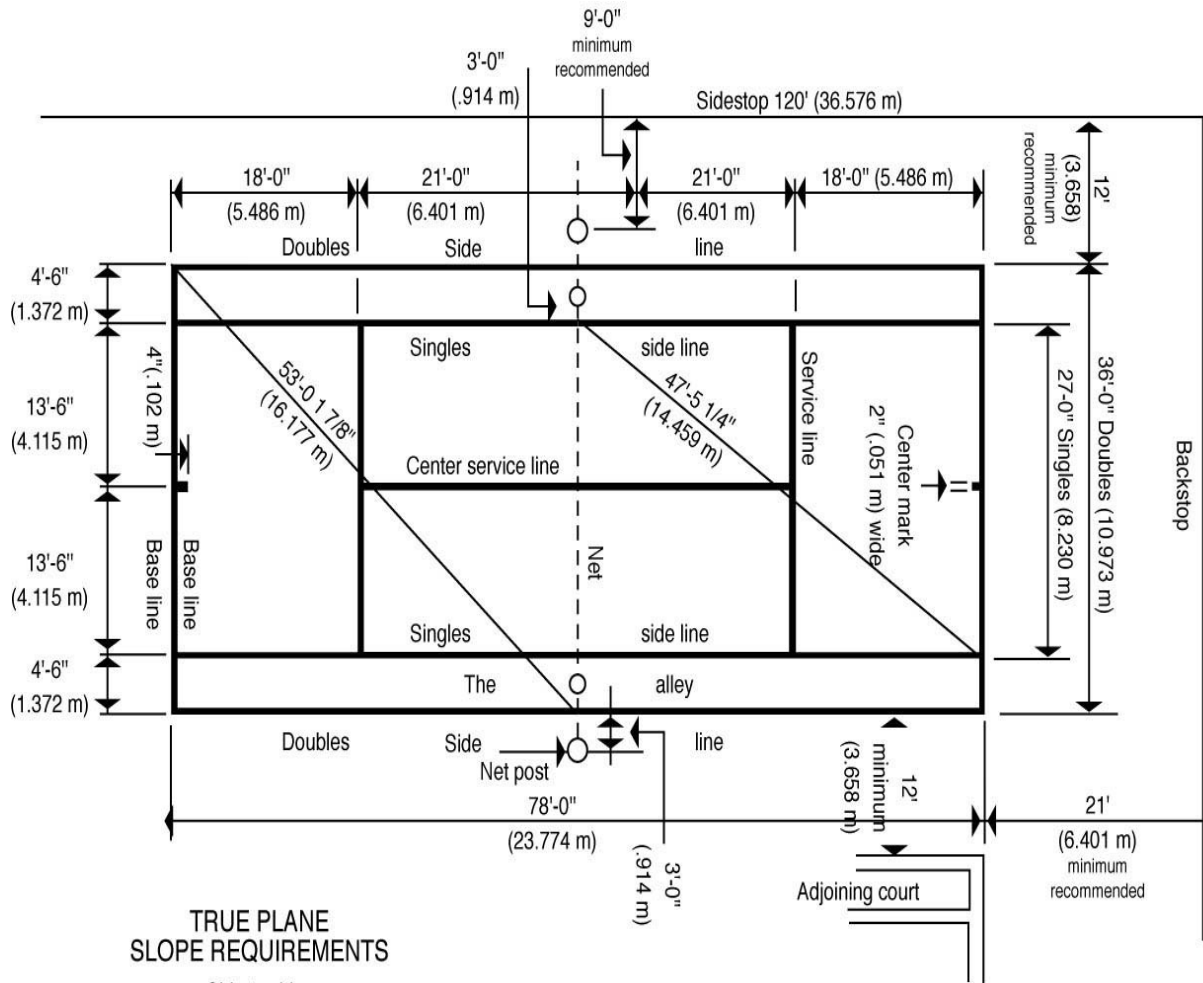
# VOLLEYBALL



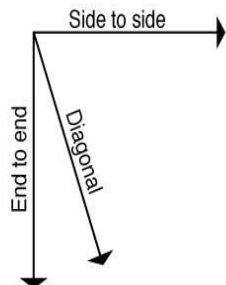
BADMINTON



# TENNIS



## TRUE PLANE SLOPE REQUIREMENTS



1" in 20'-0" to 1" in 30'-0"  
fast dry courts

1% maximum  
hard courts

○ Marker for singles sticks  
or singles net posts

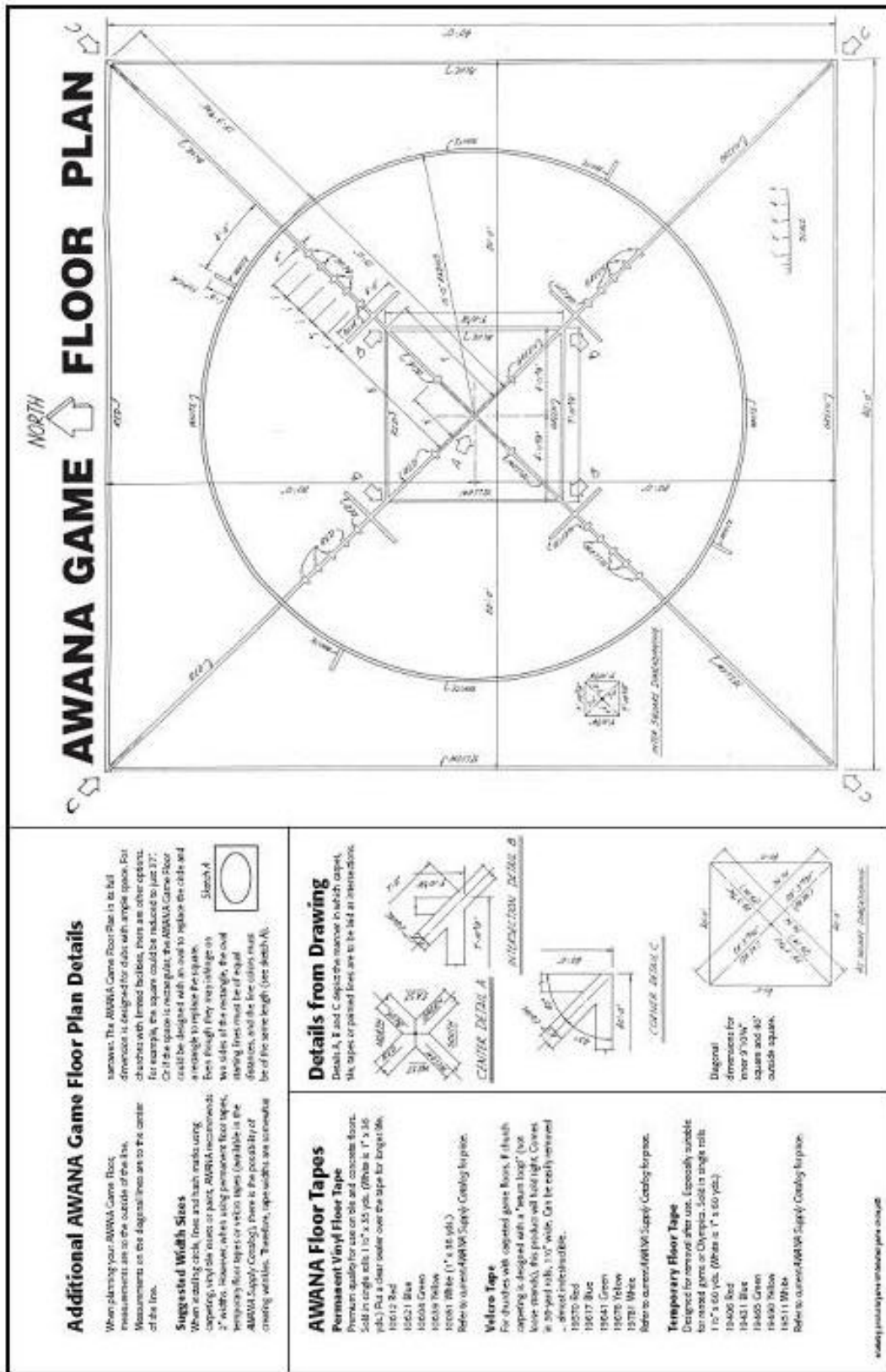
Lines width: 2" (5 cm)

4" (10 cm)

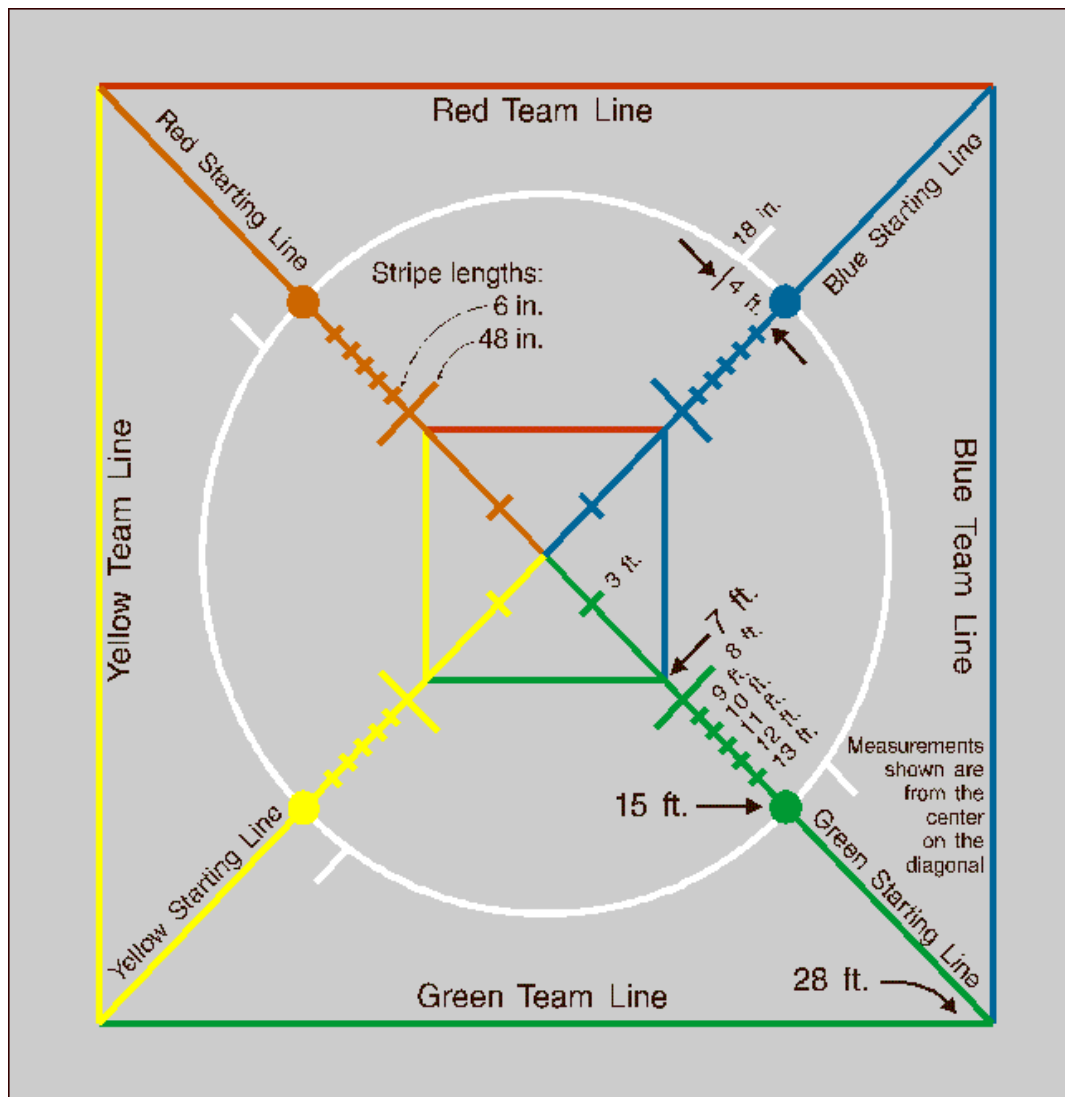
Note: base lines can be 4" wide

Line should not vary more than 1/4" (.64 cm) from exact measurement

# AWANA



## AWANA COLOR SCHEME





## **1. PAINTING GAME LINES**

**Game line paint should be applied only by experienced professional game line applicators.**

The following procedures are for the purpose of providing a general guideline for the application of TARAFLEX game line paints. Please also note instructions on game line paint containers. TARAFLEX game line paint is designed for application of game line only – maximum 3'' width. The paint is not suitable for painting large areas such as solid keys or borders. Also it is advisable to allow a minimum ½ '' wide space between different colors of paint to prevent bleeding of colors.

### **1.1. TARAFLEX FLOORING PREPARATION**

- Clean floor surface by damp mopping with clear, clean warm water
- Do not put any soap or detergent into the cleaning water as it can leave a residue that will prevent proper bonding of primer

### **1.2. TAPING, PRIMER, AND PAINT**

- Measure and layout game court areas. Double-check all dimensions to avoid errors in layout. All game lines should be masked with **3M (BLUE)** professional masking tape. Rub tape firmly against floor surface to accomplish a tight bond.
- After masking tape has been completely bonded, the area between the tape should be cleaned with a white 100% cotton rag dampened with acetone. Change rags frequently and dispose of all rags carefully as they are flammable. Do not smoke in the room area and make sure the ventilation system is in operation. Also there should be no flame or pilot lights. Allow acetone cleaning solvent to dry 20 to 30 minutes.
- Mix primer thoroughly and then apply a thin coat of clear Primer to all areas between the masking tape. Apply primer with a short nap mohair paint roller; 1'' wide for 1'' lines and 2'' wide for 2'' lines. Follow paint manufacturer's instructions for drying time before painting.
- Mix colored game line paint, part A and part B, thoroughly.

**Accidental paint spillage or traces must be remove immediately with acetone.**

### **1.3. APPLICATION**

- It is very important that the application of the game lines be done after the work of all the other trades has been completed to prevent damage or contamination of the floor surface. The areas should be closed off to all traffic. Also all doors and windows to the area should be closed to prevent dust contamination. It is recommended that the air handling system or the air conditioning system be operated to help exhaust paint odors.
  - The game line paint should be applied at a temperature of 65°F to 85°F. Also, relative humidity should be between 20% to 60%. These conditions will allow the paint to properly dry and cure.
  - Do not lift and pull tape from the surface. In order to prevent damage to painted line, remove tape by pulling it back across itself slowly. This will leave a clean edge to the paint line.
  - All painted gamelines must be allowed to dry and cure according to the paint manufacturer's specifications. Restrict all traffic until paint is fully cured.
  - When rolling the paint, move in only one direction. Do not roll back and forth. Keep movement slow and steady. Once the roller has been redipped, be sure to place the roller carefully onto the end of the previously applied section overlapping slightly and continuing forward in the same direction. This will help to reduce or avoid chatter marks in the game line paint. (roller marks)
  - Do not apply the paint too heavily. Follow the paint manufacturer's recommendations for thickness and quantity of coats.
-

- Apply colored game line paint using a short nap mohair paint roller – approximately 1’’ wide for 1’’ lines and 2’’ wide for 2’’ lines. Paint roller should be solvent resistant. It’s also important that the paint be applied in a thin uniform coat. After completion of first coat application, apply a second thin coat of paint. The second coat of paint should be applied within one to two hours after application of the first coat. It is important that the second coat be applied while the first coat is still wet to accomplish good quality bond. Do not allow paint to dry before pulling the game line tape. Respect the paint manufacturer’s guidelines.

### **CAUTION!**

*Double check all gam lines for accuracy before applying primer and paint.  
Once the paint is dry, to date there is no known chemical to remove it without  
permanently damaging the flooring.*

#### **1.4. APPROVED PAINT SUPPLIERS**

- NOVA 3000
  - Advantage Sport USA  
1 Tigan Street  
P.O. Box 266  
Winooski, VT 05404  
TEL 800 653-2674  
FAX 802 655-2809
- ENDURA
  - Endura-Can-Am Coatings Inc.  
444 Vernon Way  
El Cajon, CA 92020  
TEL 619 937-0430  
FAX 619 444-0394

## 1. Tools Specific for Gerflor Installations

### 1.1. ELECTRIC GROOVER



Use a Leister type electric groover.

The groover comes standard with a 3.5 mm blade.

### 1.2. AUTOMATIC WELDERS



It is required to use automatic heat welders for all Taraflex Sport Resilient Sheet Flooring.

Use a Leister “Uniweld” type welder.

### 1.3. SEAM PLANES (SKIVING)



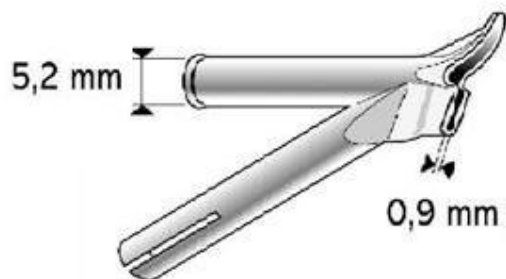
Customized seam plane for Taraflex Sport Resilient Sheet Flooring. Single pass system with a narrow channel for safety when cutting welds.

This unit is faster and safer than the conventional “moon knife” or “skiving knife”.

Narrow channel restricts cutting blade to reduce risk of shaving the surface of the Taraflex product.

Ask for the Gerflor Seam Plane when ordering from Winkelman's

### 1.4. HEAT WELD TIP



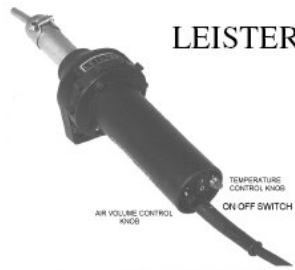
Use only the Leister #105433 Speed Tip for all Taraflex hand welding.

### 1.5. HAND WELDERS (USED ONLY FOR SHORT WELDS ONLY)



LEISTER  
TRIAC S  
WORLD TOOL  
120V 1600W  
100.730  
100.303

**WDD 601**



LEISTER  
HOT JET S  
WORLD TOOL  
120V 465W  
100.862  
107.144

**WDD 606A**

Leister Hot Jet S  
is recommended  
for flash cove  
projects.



STEINEL  
HG 2300 EM  
120V 1750W  
100.303

**WDD 626**

### 1.6. VINYL ROLLER



Use a 100lb  
minimum three  
sectional roller.

The multiple  
sectional roller is  
designed to  
conform to the  
shape of the floor  
if minor  
imperfections  
exist

### 1.7. "ADVANTAGE CUT" UNIVERSAL RESILIENT SHEET CUTTING TOOL



This is a great universal tool for to double cutting, trace gutting, and circle cutting. A special attachment on the backside of the unit allows for it to be attached to a game line taping machine. Works great with a straight edge for creating long straight cuts safely and swiftly.

Order from Advantage Sport USA.

### 1.8. SPECIFIC TOOLS FOR TARAFLEX LOCKER



**WDD 645 SLIM TRIM KNIFE**  
**WITH SPECIAL DIAMOND SHARPENING PAD**  
**GREAT ON RAISED KNOB AND ANTI SLIP FLOORS**  
( Saves your Spatula Knife from the Anti Slip Floor)

Tool specifically designed for skiving the welds of raised button resilient flooring. Can be ordered from Winkelman's.



**WDD 748**  
**FEED ROLLER TEFLON FOR**  
**ROUND & HALF ROUND ROD**  
**1/4" ROUNDED TEFLON ROLLER**  
**ON THE OTHER END**

Tool used for flash coving. Order from Winkelman's.



### BULLET FINISHING TIPS

Slip on to the  
Standard Nozzle

WDD656 ( QUARTER INCH )  
WDD657 (HALF INCH)  
WDD658 (THREE EIGHTS INCH)  
WDD660 ALL THREE

"Bullets" are used for the smoothing a rough weld on a flashed cove. Unit attaches to your heat gun. Adjust the temperature so you do not burn the material.



### SPLICING SMOOTHING REPAIRING

TRIM INSIDE CORNER WELDS  
CUT COVING WELD GROOVES  
TRIM COVING WELD ROD FLUSH

1 1/16" wide  
Teflon coated  
curved tip  
WDD 715R

WDD 984D  
WDD 984C  
WDD 984E  
WDD 984F

This tool is used for smoothing, grooving, repairs, and touch ups. Can be ordered from Winkalmen's.

Winkalmen's has offered to all Gerflor Contractors and Distributors and additional 10% off for all tool purchases. When ordering, please acknowledge that you are a Gerflor Contractor or Distributor.



## 1.9. KNEE PADS RECOMMENDED FOR RESILIENT SHEET FLOORING



“PROKNEE” knee pads are recommended for all Gerflor Resilient Sheet Flooring. The large flat area on each pad reduces adhesive displacement, and is excellent for knee protection. The pads are replaceable and the skeleton should last a lifetime. Although more expensive than conventional knee pads, your knees are valuable enough to warrant the cost. Protect your knees and help protect your installation.

[www.proknee.com](http://www.proknee.com) or see your local Distributor