

2013

RPM Propel™ Installation Guidelines



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I. Project Staging

Delivery:

- To avoid damage to product and possible injury to personnel it is highly recommended to unload utilizing a pallet jack and truck equipped lift-gate or fork lift.
- Verify at this time that the shipment is correct: style, quantity, thickness and color. Claims will not be honored after product is unrolled and installed.



Moving Material Onsite:

- Obtain four feet (1.2m) of 2" (5 cm) galvanized or ductile pipe
- Insert pipe in roll core leaving approximately two feet (.6m) exposed. Using pipe as leverage, lift end of roll while placing a heavy duty furniture dolly under center point.
- Once placed in appropriate location, roll rubber off cart. Extreme caution should be taken not to be in path of roll or attempt to slow its movement.

Roll Storage:

- Storage area must be secure, weather-tight and maintained at a minimum of 55 °F (12.8°C)
- Store material up-right on a clean, dry, flat surface.

II. Jobsite Conditions

Environmental:

- Installation should not begin until all trades; painting, ductwork, drywall, etc. are complete. If installation is begun prior to other trades completing it may be difficult, if not impossible, to completely clean and remove all construction dirt from floor surface.
- Area must be secured from other trades and foot traffic once installation begins.
- Permanent HVAC and lighting installed and operating.
- Maintain a moderate room temperature of 65 to 80 ° (18.3 to 26.7 ° C) for 72 hours prior to, during and 72 hours after the installations.
- Area must be weather-tight with permanent windows and lockable doors.

Concrete Subfloor:

- Perform moisture testing of the slab, results must not exceed 5 lbs. per 1000 (2.27 kg per 304.8 m) in accordance to ASTM F1869 Anhydrous Calcium Chloride and/or “Determining Relative Humidity in Concrete with In-Situ Probes” not to exceed 85% respecting ASTM F2170. Report results to the general contractor. The HVAC must be operational with a constant temperature for 7 days before testing otherwise test shall be considered invalid.
- Concrete finish must be a smooth and steel troweled. If slab appears to look like a stained concrete finish; polished, shiny, slick and non-porous, pour 1 to 2 ounces (28 to 57 g) of water on surface, if water beads and is not readily absorbed within a few minutes shot-blasting may be required. Perform bond test to confirm adhesion to concrete.
- Concrete must dry for a minimum of 30 days and pass all moisture tests.
- Slab must be clean of curing compounds, sealers, surface hardeners, paint, oil, grease, old adhesive or any other surface contaminant. Remove any foreign material by sanding, grinding, or shot blasting. **DO NOT USE CHEMICAL STRIPPERS OR CITRUS BASE SOLVENTS AS THEY MAY PENETRATE THE SLAB AND CAUSE ADHESION FAILURE**
- Check slab for levelness using a 10 foot aluminum screed or straight-edge. Surface deviations shall not exceed 1/8 inch (3mm) with balanced 10 foot (3m) straight edge over high spots or bridged over low spots. Concrete plane or grind high spots and fill low spots with a Portland base filler such as Ardex Feather Finish. Do not use gypsum base patch. RPM Sports does not accept nor recognizes FF or FL numbers.
- As with any direct glue sport surface bonding test are recommended.
- Radiant heat must be turned off 48 hours prior to, during, and 48 hours after installation. Temperature may never exceed 85 °F (26.7°C) when operating. If necessary to maintain optimum conditions an alternate heat source may be required during the installation period.
- Lightweight concrete is generally not suitable and strongly discouraged; if required it must be stable and have a density of 100 lbs/ft³ (1.6 g/cm³).

III. Installation

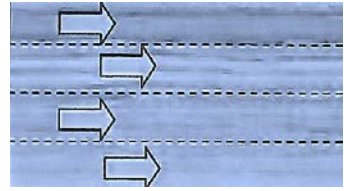
Subfloor prep:

- Verify all requirements in the above section have been strictly met.
- If included in contract, concrete plane or grind high spots, fill low spots, surface imperfections, and saw cuts with a Portland base filler such as Ardex Feather Finish.
- Sand concrete slab utilizing a low speed buffer and 24 or 36 grit sandpaper. If paint or other contaminants are still present after sanding grinding or shot-blasting may be necessary. Sanding of subfloor is required and necessary for an adequate bond.
- After sanding sweep and vacuum to remove dust and dirt, **DO NOT USE SWEEPING COMPOUND** as they may interfere with adhesive bond.
- Tack concrete subfloor with clean water and well rung out towel until dust free before rolling out material. This is imperative to keeping floor clean of dust during installation and will alleviate many headaches after completion.
- Wipe feet when leaving and re-entering area. **Keeping floor clean cannot be stressed enough.**



Unrolling Rubber:

- Ensure subfloor is clean and dust free as described in prep section.
- Square and chalk a line down room center parallel to length.
- Unroll and set first piece straight following struck chalk line. Note direction the material was unrolled as all pieces must be uncoiled in same direction. Each roll is marked with a production number and each piece must be positioned in sequence to avoid shading (see below). **Failure to follow roll sequence or reversing roll direction will result in a unacceptable installation and total replacement.**



- When possible, on multicolor jobs, place the seams of the two colors under the center of the game line paint. This will be especially true when installing running tracks with alternating color lanes.

Roll no. 1	Balance of roll no. 4	Balance of roll no. 7	Balance of roll no. 9	Balance of roll no. 12	Balance of roll no. 15	Balance of roll no. 20	Balance of roll no. 22	Balance of roll no. 25
	Roll no. 5		Roll no. 10				Roll no. 16	
Roll no. 2	Roll no. 6	Roll no. 8	Roll no. 11	Roll no. 13	Roll no. 17	Roll no. 21	Roll no. 24	Roll no. 26
				Roll no. 14				
Roll no. 3	Roll no. 7	Roll no. 9	Roll no. 12	Roll no. 15	Roll no. 20	Roll no. 22	Roll no. 25	Roll no. 27
Roll no. 4								

- Overlap cross (head) seams by 6” (15 cm) and overlie length seams by 3/16” (4.7mm) when setting pieces.
- **Once all material is set thoroughly inspect rubber floor. In the event of questions or concerns immediately contact RPM Sports BEFORE any adhesive is spread. Gluing verifies acceptance and no warranty claim will not be honored after that time.**
- Unroll and set all pieces and allow setting overnight ensuring HVAC will not cycle off during evening hours.

Seaming:

- Make multiple passes when cutting seams, after making the first cut with a utility knife some find a hook blade useful to complete the cut.
- **Before gluing:** Trim length seam edges approximately ½” to 1” (12.7mm to 25.4mm) off both sides with straightedge. After trimming overlap length seams by approximately 3/16" (4.7mm), **excessive overlap can and will cause seam peaking. When placing length seams after gluing, ensure material is flush, use masking tape to hold tight together and apply brick weights.**
- **After gluing:** Cut cross (head) seams with a true straight edge that is longer than the joint, trim the bottom piece approximately 3 inches (7 cm), remove cut piece. Using previous cut as guide, allow 3/16" (4.7mm) overlap and with straight edge cut top piece. A slight 5-degree bevel or less will create a perfect seam, **do not over bevel or reverse bevel.** Apply adhesive to slab, tape joint and weight.
- **Exercise extreme caution when cutting and placing cross seams to avoid excessive pressure while ensuring a tight joint. Excessive compression will guarantee a peaked joint regardless of weight applied.**

Adhesive:

- Set up mixing station for adhesive. Adhesive components will stain concrete and destroy floor coverings, protect area from unavoidable drips and spills with plywood or a 10'X10' (3m x 3m) double layer of 6 mil poly adjacent to installation area.
- Do not apply adhesive when temperatures are under 65 °F (18.3°C) or over 105°F (40.6°C).
- Working time for adhesive varies depending on conditions and will thicken rapidly in the pail, do not mix unit until completely ready.
- With ½ inch (12mm), variable speed, extra heavy duty drill and 5 gallon (20 liter) size mixing paddle carefully pour part B into Part A and blend components. Mix until consistent and streak free, approximately 2 minutes. Under mixed adhesive will not set properly, excessive mixing will accelerate curing and shorten work time.
- Temperature must be 65 °F (18.3°C) or higher but less than 105°F (40.6°C) for adhesive to set properly.
- Adhesive will bond to concrete, asphalt, metal, urethane and wood.

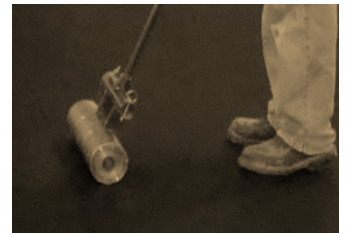


Method #1 Direct Roll: Note, This method can be utilized regardless of manpower

- Start at center run, roll rubber back from both ends of piece to approximately center.



- For first row spread adhesive 2" (5cm) from both edges of the long seam and 12" (30 cm) from any cross (head) seam.
- Carefully unroll rubber into the freshly laid adhesive being extremely cautious to maintain a maximum overlap of approximately 3/16" (4.7mm).
- After unrolling work seam together.
- Keep cross seams cut as runs are glued.
- Remove all excess adhesive that may ooze through the seams or any drops from surface using denatured alcohol, do not use other types of solvent. **Adhesive must be removed before drying, set adhesive will be difficult if not impossible to remove.**
- Use 2" (5cm) masking tape to close gaps in seams, remove after adhesive has dried. **Do not use duct tape, as it will chemically react with the flooring surface and tape adhesive can become impossible to remove.**
- Intermittently verify the correct transfer of adhesive to rubber back. Re-notch or replace trowels as they become worn. Maintain correct spread rate at all times, from first to last piece.
- Complete each row before starting the next adjacent one.
- Start second row; when spreading, apply adhesive 2" (5 cm) under edge of previous piece where glue was left short and stop 2" (5 cm) from new runs outside edge.
- As runs are glued weight all seams with white cinder bricks, avoid red or colored bricks as they can and will stain the surface and ensure a cleanup headache. Leave bricks in place for at least 12 hours as this will minimize peaking on properly cut seams. Multiple stack bricks on cross seams and where necessary on length seams. The amount of bricks needed depends on the compression of the seam and thickness of the material. Apply more weight if stacked bricks appear to tilt on the seam. **You cannot place too much weight as it is critical to place enough on each seam to prevent peaking, the only reason for lifting on a properly cut seam is not enough weight.**
- Approximately one hour after gluing roll floor in multiple directions with a 100lb (45.4 kg) roller to eliminate any trapped air and ensures adhesive transfer. Additional rolling is recommended before adhesive sets.
- Continue process until all pieces are adhered.
- If wall has not been reached at day's end strike chalk line down center of run to use as a spread line. The next day fold run back being careful to spread completely up to old spread line at crease without leaving holidays or puddles. Continue gluing process as previous day.
- Weight doorways, room perimeter and around floor boxes.



Method #2 Carpet Fold: This method requires sufficient manpower to fold full runs without shifting pieces and recommended for experienced installers only.

- Space crew down length of center run, fold back to middle of piece, extreme care must be exercised to avoid shifting piece. Repeat on the adjacent row to expose a double shot.
- Spread adhesive down double run and up to fold on both sides, keep adhesive line straight.
- Again space crew down length of run, carefully unfold material back into freshly laid adhesive exercising caution to not shift piece. Repeat on adjacent folded piece.
- As in "direct roll method" work seam together.
- Keep cross seams cut as runs are glued.

- Remove all excess adhesive that may ooze through the seams or any drops from surface using denatured alcohol, do not use any other solvent. **Adhesive must be removed before drying, set adhesive will be difficult if not impossible to remove.**
- Use 2" (5cm) masking tape to close gaps in seams, remove after adhesive has dried. **Do not use duct tape, it will chemically react with the flooring surface and tape adhesive can become impossible to remove.**
- Intermittently verify the correct transfer of adhesive to rubber back. Re-notch or replace trowels as they become worn. Maintain adhesive spread rate at all times, from first to last piece.
- Complete each row before starting the next adjacent one.
- As runs are glued weight all seams with white cinder bricks, avoid red or colored bricks as they can and stain the surface and ensure a cleanup headache. Leave bricks in place for at least 12 hours as this will minimize peaking on properly cut seams. Multiple stack bricks on cross seams and where necessary on length seams. The amount of bricks needed depends on the compression of the seam and thickness of the material. Apply more weight if stacked bricks appear to tilt on the seam. **You cannot place too much weight as it is critical to place enough on each seam to prevent peaking, the only reason for lifting on a properly cut seam is not enough weight.**
- Approximately one hour after gluing roll floor in multiple directions with a 100lb (45.4 kg) roller to eliminate any trapped air and ensures adhesive transfer. Additional rolling is recommended before adhesive sets.
- Continue process until all pieces are adhered.
- If wall has not been reached at day's end strike chalk line down center of run to use as a spread line. The next day fold run back being careful to spread completely up to old spread line at crease without leaving holidays or puddles. Continue gluing process as previous day.
- Weight doorways, room perimeter and around floor boxes.



IV. Game lines

Prep:

- **Floor must be clean of dust, dirt, wax, oil, lint, or any type of contaminants.**
- If applicable, verify locations of goals and floor standards, report any discrepancies to owner or General Contractor before proceeding. **ONCE PRIMED LINES CANNOT BE MOVED.**
- Layout and mark off courts per drawings respecting appropriate games governing body. Report any discrepancies between drawings and regulation courts before proceeding.
- Mask off each court with solvent resistant tape such as 3m 233+ and firmly roll down.
- With solvent resistant gloves dampen a lint free cloth with Lord Chemical Co. CHEMLOK #7701 primer and scrub masked area to be painted. **CAUTION: PRIMER CAN AND WILL STAIN FLOOR, DO NOT DRIP OR ALLOW PRIMER TO TOUCH ANY SURFACE EXCEPT AREA TO BE PAINTED. USE ONLY A DAMPENED TOWEL TO PRIME, APPLYING TOO MUCH OR FLOODING MASKED AREA WILL RESULT IN UNDER TAPE BLEEDING AND STAINING OF SURFACE ADJACENT TO LINE. OBSERVE ALL SAFETY PRECAUTIONS WHILE USING PRIMER.**
- Apply paint within 1 hour after priming.

Paint:

- **Paint must be applied within 1 hour after priming**, re-prime if necessary.
- Due to textured surface paint must be sprayed, no other method is acceptable.
- Spray lines with 2 or more light even coats, **attempting to apply heavy coats will result in bleeding and a unacceptable ragged edge. DO NOT SPRAY THICK COATS.**
- Pull and remove tape while paint is wet.
- Check for and remove any drips, splatters or smears or smudges before paint dries with acetone.

Curing:

- Close and lock area for 7 days after completion of game line application. Paint will not be adhered when first applied; 3 to 5 days are required for the initial bond. **If foot traffic is allowed on floor during the 7 day cure period the paint can and will delaminate.**
- **Do not perform any major cleaning or scrubbing for a minimum of 30 days after completion.**

The guidelines offered within this document are recommendations only and are not intended to be all inclusive. It represents current knowledge based on experience, available resources, ASTM, and other industry standards. As every installation is different the flooring contractor needs to verify applicability of these recommendations to the product and jobsite conditions. This manual should only be utilized by professional flooring mechanics who are experts in their field.

Equipment & Tools

- Denatured alcohol
- Rags
- Fine bristle push brooms and straight brooms
- Buffer (disc sander)with 36 grit paper
- Stand up razor scrape
- Vacuum for dust removal
- Heavy duty ½” (12mm) variable speed drill motor
- Blade type mixer
- Extension cords
- 1/16 X 1/16 X 1/16 (1mm x 1mm x 1mm) Notched trowels for adhesive
- Chalk line with white dust
- Utility knives with extra blades
- Hook knives with extra blades
- Six foot (2 m) straight edge
- Large framing square
- Large heavy duty T-square
- 100 (30 m) and 30 (10 m) foot tape measures
- 100 lb. (45.4 kg) roller
- Pallet jack
- Four wheel dollies
- Three foot piece (1 m) of 2 ½ or 3 inch (6 or 7 cm) heavy pipe (assist in shifting and lifting rolls)
- Two wheel hand truck
- Bricks for seams
- Trash bags
- Masking tape for seams
- Small roll 6 mil poly
- Tack towels (remove dust from slab before rolling out material)