

Laykold Masters 5 System

INSTALLATION GUIDE

Advanced Polymer Technology (APT) has prepared this installation guide to aid in the application of the Laykold surfacing system. Any references to consumptions are approximate due to variations in site conditions and application techniques. Before starting any work, the applicator should thoroughly review this installation guide and all system component technical data sheets.

Laykold Masters 5 System

The Laykold Masters 5 system is a cutting-edge polyurethane/rubber/acrylic composite court system, consisting of a 4mm rubber shock pad adhered to the substrate, and sealed and surfaced with the Laykold Masters Premium Topcoats, and completed with the Laykold line paints.

MIXING OF MATERIALS

Laykold system components are supplied in concentrated form. Each component must be mixed appropriately prior to installation. Mixing can be performed in a low-speed mixing tank or in a clean 55-gallon drum using a 1/2" (minimum) heavy-duty drill (7 amps minimum) fitted with a stainless steel mixing blade/shaft (shaft 1/2" x 36" long; blade 8 1/2" x 5"). Materials should be mixed at a low speed (400 - 600 rpm) taking care not to introduce air into the product. Mix until material is consistent in color and texture. The mixing ratio for each product is listed below:

Laykold Component	Maximum Dilution Material to Water	System Type
LM Adhesive	None	2K PU
Laykold Crack Filler	None	2K PU
LM Filler	5:1	1K Acrylic
LM Topcoat 60/ LM Topcoat	4:1	1K Acrylic
LM Topcoat Finish	1:1	1K Acrylic
Laykold Line Paint	None	1K Acrylic

POT LIFE

The pot life is set at a temperature of 68°F. Pot life will vary with temperature.

Laykold Component	Pot Life
Laykold PU Adhesive	30-40 minutes
Laykold Crack Filler	20-30 minutes

All other Laykold Masters components are water-based acrylics. Excess material may be resealed and stored in a cool dry environment for future use. Shelf life is approximately 1 year.

SUBSTRATE REQUIREMENTS

Asphalt: Shall be properly compacted to achieve specified density and shall be paved in such a manner as to result in a true and even surface, meeting all dimensional and elevation accuracy. The asphalt surface shall be clean and free of all dirt, oil, grease or foreign matter. The minimum cure for asphalt is 14 days.

Concrete: Shall be of a mix design that meets specifications and shall be placed in such a manner as to result in a true and even surface, meeting all dimensional and elevation accuracy. The concrete surface shall be clean and free of all dirt, oil, grease or other foreign matter. The minimum cure time for concrete is 30 days. Concrete surfaces shall require RH testing, per ASTM F2170, prior to application of the Laykold system.

QUALITY ASSURANCE

The installer of the Laykold Masters surfacing shall be certified by APT. All components shall be manufactured and supplied by APT, an ISO Certified Company.

SURFACE PREPARATION

A. New Concrete or Existing Concrete Substrates

1. Concrete must be shot blasted, hydro blasted, and/or bush mill hammered to a CSP3 profile.
2. The workmanship of other contractors including the sub-base shall be level and compacted. The field dry density shall be a minimum of 95%. The concrete base must have a maximum deviation of 1/4" below a 10-foot straight edge when measured by any random path.
3. New concrete shall be cured for a minimum of 30 days before proceeding.
4. All surfaces shall be checked to ensure a level surface. The surface shall be flooded with water, any area that retains 1/8" of water in depth after 20 minutes should be marked and leveled after the Laykold Epoxy VTB Primer (Qualipur 182) application. All cracking and construction joints should be filled with the correct sealant. This sealant should be designed for waterproofing or moisture mitigation.

5. Surface cleaning - All surfaces must be clean, dry, and free from any bond inhibiting contaminants and foreign residue. Pressure wash the surface to remove any residues.
6. The polyethylene vapor barrier application shall be applied by additional contractors. The application of the barrier shall be installed preceding any cables or steel. The vapor barrier shall be applied at a minimum of two (2) 6-mil layers. Once the installation is completed do not allow any traffic (including vehicular) onto the surface.

B. New Asphalt Substrates

1. The workmanship of other contractors including the sub-base shall be level and compacted. The field dry density shall be a minimum of 95%. The asphalt base must have a maximum deviation of 1/4" below a 10-foot straight edge when measured by any random path.
2. New asphalt shall be allowed to cure for a minimum of 14 days before proceeding.
3. All surfaces shall be checked to ensure a level surface. The surface shall be flooded with water, any area that retains 1/8" of water in depth after 20 minutes should be leveled with the approved product. All cracking should be filled with the correct sealant.
4. Surface cleaning - All surfaces must be clean, dry, and free from any bond inhibiting contaminants and foreign residue. Pressure wash the surface to remove any residues.
5. After all patching, leveling and crack filling has been performed; new asphalt pavements are to be filled with one to two applications, as needed, of LM FlexFill. Failure to properly fill new asphalt pavements will result in excessive LM Adhesive consumption

C. Previously Coated Asphalt Substrates

1. All surfaces shall be checked to ensure a level surface. The surface shall be flooded with water, any area that retains 1/8" of water in depth after 20 minutes should be leveled with the approved product. All cracking should be filled with the correct sealant.

Surface cleaning - All surfaces must be clean, dry, and free from any bond inhibiting contaminants and foreign residue. Pressure wash the surface to remove any residues.

LM Adhesive

The LM Adhesive is a two-component polyurethane, pre-packaged in A and B units. Pour the B contents into the A container and power mix for 2-3 minutes, until thoroughly blended. Apply the LM adhesive with a 1/8" notched, steel trowel onto the substrate at the rate of 0.15-0.18 gal/yd² or 50-60 ft²/gal. Apply the adhesive in line with the LM 5 Shock Pad and lay/roll the rubber into the wet adhesive taking care not

to leave any ripples or bubbles. Take care to install the rubber in a straight-line fashion, adjust alignment of the rubber as needed, do not over stress/stretch the rubber. Then the rubber surface shall be progressively rolled with an 80-100 lb carpet type roller, to ensure proper transfer of the adhesive. Repeat the roller process as needed over the course of 1-3 hours to ensure transfer, and removal of all bubbles or ridges. Bricks may be needed as weights on edges and joints to prevent the rubber mat from curling up before the adhesive cures.

NOTE: the notches on trowels wear down quickly, re-groove as necessary to maintain proper consumptions.

Laykold Crack Filler - One (1) Coat

Apply the Laykold Laykold Crack Filler using an 18" steel trowel. Mix the Laykold Crack Filler and pour onto the rubber surface and spread across the width of one roll, taking care to overlap over the seams. The application rate shall be 0.1-0.2 gal/yd² or 45-90 ft²/gal of Laykold Crack Filler. Allow to dry a minimum of 4 hours.

On applications where the rubber mat butts up against a wall, leave a gap of approximately ¼" and fill with the Laykold Crack Filler. Where the edges of the rubber mat are exposed, apply a bead of Laykold Crack Filler to protect from the ingress of water.

NOTE: When cured, scrape or out imperfections.

LM Bond-Kote – One (1) Coat

The LM Bond-Kote is a latex emulsion, ready to use – do not dilute. Pour an even bead of Bond-Kote onto the surface and spread out evenly using a 24", 30" or 36" 50 Durometer flexible rubber squeegee. Apply in a wet-to-wet fashion across the court. Application rates shall be 0.02 gals/yd² or 450-500 ft²/gal.

Adequate ventilation is required during the application process, always wear proper personal protective equipment.

Allow LM Bond-Kote to dry (1-2 hours) before the application of the LM Filler.

LM Fill – Two (2) Coats

Apply the first coat of the Laykold Fill using a 36", 55 Durometer flexible rubber squeegee. Thoroughly mix the LM Fill until the material is consistent in color and texture. The application rate shall be 0.05-0.07 gal/yd² or 130-180 ft²/gal of undiluted Laykold Fill, per coat.

Sand or scrape out imperfections after first coat, clean surface before application of second coat. Apply the second coat of Laykold Fill, typically at 90° angle to the first coat. The application rate shall be 0.05-0.07 gal/yd² or 130-180 ft²/gal. When cured, scrape or sand out imperfections.

LM Topcoat – Two (2) – Three (3) Coats

Laykold MS2 – ITF Classification 2

Apply two coats of LM Topcoat 60 using a 24", 30" or 36" 50 Durometer flexible rubber squeegee. Batch mix shall consist of 5 gallons of LM Topcoat 60 and 1.25 gallons of potable water. The application rate shall be 0.07-0.08 gal/yd² (0.47-0.52 kg/m² - 110-130 ft²/gal) of undiluted LM Topcoat 60 per coat. Each layer should be completely dry before applying subsequent layers.

The second LM Topcoat, is applied lengthwise on the court first with the rubber squeegee, and then followed with a broom/brushing of the coating to achieve an even, consistent application – thus eliminating the squeegee pattern.

Allow the final topcoat to completely dry, before the application of tape and game lines.

Laykold M3 – ITF Classification 3

Apply two coats of LM Topcoat using a 24", 30" or 36" 50 Durometer flexible rubber squeegee. Batch mix shall consist of 5 gallons of LM Topcoat and 1.25 gallons of potable water. The application rate shall be 0.06-0.07 gal/yd² (0.41-0.47 kg/m² - 130-150 ft²/gal) of undiluted LM Topcoat per coat. Each layer should be completely dry before applying subsequent layers.

The second LM Topcoat, is applied lengthwise on the court first with the rubber squeegee, and then followed with a broom/brushing of the coating to achieve an even, consistent application – thus eliminating the squeegee pattern.

Allow the final topcoat to completely dry, before the application of tape and game lines.

Laykold MF4 – ITF Classification 4

Apply two coats of LM Topcoat using a 24", 30" or 36" 50 Durometer flexible rubber squeegee. Batch mix shall consist of 5 gallons of LM Topcoat and 1.25 gallons of potable water. The application rate shall be 0.06-0.07 gal/yd² (0.41-0.47 kg/m² - 130-150 ft²/gal) of undiluted LM Topcoat per coat.

Apply one coat of LM Topcoat Finish using a 24", 30" or 36" 50 Durometer flexible rubber squeegee. Batch mix shall consist of 5 gallons of LM Topcoat Finish and 5 gallons of potable water. The application rate shall be 0.03-0.04 gal/yd² (0.17-0.23 kg/m² - 225-300 ft²/gal) of undiluted LM Topcoat Finish per coat.

Allow the final topcoat to completely dry, before the application of tape and game lines.

GAME LINES (One (1) -Two(2) coats as needed)

All lines are to be marked using masking tape according to U.S.T.A. and A.S.B.A. specifications. Wait a minimum of 24 hours after final Color Coat before applying any line primer or line paint. Prime masked lines with Laykold Line Prime and allow drying until primer becomes clear. Apply one to two coats as needed of Laykold Textured White Line Paint using a paint brush or roller. Remove masking tape immediately

after lines are dry. Allow lines to dry a minimum of 24 hours before allowing play on court

COVERAGES

Actual coverage rates are dependent upon a variety of factors relative to the field application. The installer must assess the conditions prior to ordering material. Allowances must be made for waste in mixing, pouring, and field conditions.

LIMITATIONS

- ⇒ Minimum cure time for asphalt is 14 days, for concrete 30 days.
- ⇒ Do not apply over damp or wet substrates.
- ⇒ Do not apply coatings if extremely high humidity prevents drying.
- ⇒ Do not apply to surfaces during the out-gassing of vapor.
- ⇒ Minimum application and curing temperature 50°F (10°C).
- ⇒ Maximum substrate temperature 130°F (54°C).
- ⇒ Maximum moisture content of substrate is 4% or less.
- ⇒ Substrate temperature must be a minimum of 4° above the dew point.
- ⇒ Do not apply during inclement weather or when it is anticipated.
- ⇒ Water used in all mixtures shall be fresh and potable.

Acrylic, all-weather tennis and athletic surfacing systems are designed and used to visually enhance asphalt and concrete substrates while providing a desired surface texture, surface pace and/or speed of play. Laykold systems and system components may be used to level surface depressions, fill substrate cracking, smooth surface roughness and make other such adjustments to a new or existing surface/substrate. However, acrylic all-weather tennis and athletic surfacing systems are NOT capable of solving the problems and/or forces associated with cracked, deteriorating, or damaged substrates.

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