

Cushion Plus System Installation Guide



Advanced Polymer Technology (APT) has prepared this installation guide to aid in the application of the Laykold Cushion Plus 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.

MIXING OF MATERIALS

Laykold Cushion Plus 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 ½” (minimum) heavy-duty drill (7 amps minimum) fitted with a stainless-steel mixing blade/shaft (shaft 1/2” x 36” long; blade 8 ½” 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 Pickleball Pro Plus Component	Maximum Dilution Material to Water	Silica Sand Requirements mesh size/#'s per gallon of concentrated material
Epoxy Moisture Mitigation Primer	None	None
LM Bond-Kote	1 part to 5 parts	None
Laykold Deep Patch	None	See Technical Data Sheet
Laykold Acrylic Resurfacer*	1 part to 0.7 part	60-80 / 10-17 #'s per gal.
Laykold Cushion Plus Granular	2 parts to 1 part	None
Laykold Cushion Plus Powder	2 parts to 1 part	None
Advantage Laykold**	4 parts to 1 part*	None
Laykold ColorCoat Concentrate – Finish Mix	1 part to 1 part	None

- Laykold NuSurf may be substituted in lieu of Acrylic Resurfacer and is recommended for use over new asphalt pavements, cushioned systems and slip sheet crack repair systems. See NuSurf technical data sheet for mixing details.



- Advantage Laykold may be diluted up to 3 parts to 1 parts water in hot temperatures.

POT LIFE

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

Advantage Laykold Component	Pot Life
Epoxy Moisture Mitigation Primer	See Manufacture’s Guidelines

All other Advantage 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.

SURFACE PREPARATION

A. New Concrete or Existing Concrete Substrates

- a. Concrete must be shot blasted, or hydro blasted to a CSP3 profile if Laykold Epoxy VTB is required. When using LM Bond-Kote as an adhesion promoter, concrete must have a minimum of a medium broom finish and acid etched if using LM-Bond-Kote as an adhesion promoter.
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 ¼” below a 10-foot straight edge when measured in 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 VTB Primer application. All cracking and construction joints should be filled with the correct sealant. This sealant should be designed for waterproofing or moisture mitigation. If using LM Bond-Kote, depression should be leveled before LM Bond-Kote application.
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 ¼" 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 30 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.

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 30 minutes should be leveled with the approved product. All cracking should be filled with the correct sealant.
- b. 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

PRIMER (Concrete Only)

Primer (for concrete substrates only): When installing the Laykold Cushion Plus System over concrete, LM Bond-Kote must be applied as the first layer of the system. If applying a breathable system or RH tests less than 75%, LM Bond-Kote can be applied. LM Bond-Kote is mixed by diluting 1 part LM Bond-Kote with 5 parts portable water and mixing using a low-speed jiffy mixer (400 to 600 rpm) until uniform (3-5 minutes). Spread the mixed primer on the substrate using a 36" 55 durometer squeegee to achieve a total coverage of approximately 0.02 gal/yd² (0.09 kg/m² – 450ft²/gal). Allow to fully dry before proceeding.

If the concrete substrate tests with an RH of 75% or greater or a MVER (Anhydrous Calcium Chloride) or greater than 3 lbs./1000 sqft/24 hours, more cure time is required, or an epoxy moisture mitigation can be used. Manufacture's guidelines should be followed when applying the epoxy mitigation primer.

Note: Only use material that naturally flows out of the pail. Do not scrape, bang, or place pail upside down to force additional materials out of the pail.

FILLER COAT(S) (1-2 coats as needed)

Filler Coat(s): Apply one coat of Laykold Acrylic Resurfacer using a 24", 30" or 36" wide 70 Durometer flexible rubber squeegee. Batch mix shall consist of 55 gallons (260 kg) of Laykold Acrylic



Resurfacer, 30 to 40 gallons (115-130 kg) of potable water, and 600 to 900 pounds (270-400 kg) of clean, bagged silica sand (60 to 80 mesh). The application rate shall be 0.05-0.07 gal/yd² (0.29-0.40 kg/m² - 129-180 ft²/gal) of undiluted Laykold Acrylic Resurfacer per coat.

Note: If the asphalt is very porous, an optional 2nd application of Laykold Acrylic Resurfacer may be applied. Each coat should be completely dry before applying subsequent coats. Laykold NuSurf is highly recommended for use on new asphalt pavements and/or older pavements that have experienced hairline surface cracking.

CUSHION COATS (5-7 coats as specified)

Laykold Cushion Plus: Apply 2 coats of Laykold Cushion Plus Granule Rubber that is mixed 55 gallons (240 kg) of granule cushion to 22-27 gallons (83-90 kg) of potable water. The consumption rate for the granule cushion coat is 0.20 gal/yd² (.91 kg/m² - 45 ft²/gal). Then apply 3 coats of Laykold Cushion Plus Powder Rubber that is mixed 55 gallons (235 kg) of powder cushion to 22 gallons (83 kg) of potable water. The average application rate for the Cushion Plus Powder coat shall equal 0.12 gal/yd² (0.61 kg/m² - 75 ft²/gal) per coat. Apply cushion coats using a soft rubber, or notched squeegee. Each application shall be applied perpendicular (90 degrees) to the previous coat. Please note that the first application of Cushion Plus Powder will use the greatest amount of material as it begins to fill the rough texture created by the larger base rubber coats. The 2nd and 3rd applications of the small filler rubber will use less material with each coat for an overall average consumption rate of 0.12 gal/yd² (0.61 kg/m² - 75 ft²/gal) per coat. Allow each coat to dry completely (minimum of 5 hours) before proceeding with the next coat of Cushion-Plus or water vapor may become trapped between the cushion layers causing peeling and blisters. When more than the standard Cushion Plus system (as detailed above) is desired, the cushion layers are broken down as follows:

- a. Cushion Plus 6 (layers) – 3 coats granule, 3 coats powder
- b. Cushion Plus 7 (layers) – 4 coats granule, 3 coats powder

NOTE: More than 7 cushion layers is not recommended.

FILLER COAT(S) (1 coat)

Filler Coat: Apply one coat of Laykold Acrylic Resurfacer using a 24", 30" or 36" wide 70 Durometer flexible rubber squeegee. Batch mix shall consist of 55 gallons (260 kg) of Laykold Acrylic Resurfacer, 30 to 40 gallons (115-130 kg) of potable water, and 600 to 900 pounds (270-400 kg) of clean, bagged silica sand (60 to 80 mesh). The application rate shall be 0.05-0.07 gal/yd² (0.29-0.40 kg/m² - 129-180 ft²/gal) of undiluted Laykold Acrylic Resurfacer per coat.

NOTE: Sand cured system with floor sander and 16-24 grit paper to remove rubber nubs.

TEXTURED COLOR COATS (2-3 coats)

Apply two coats of Advantage Laykold factory textured color using a 24", 30" or 36" 50 Durometer flexible rubber squeegee. Batch mix shall consist of 30 gallons (170 kg) of Advantage Laykold and 6.5-8.5 gallons (25 to 32 kg) 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 Advantage Laykold per coat.

Optional Finish Coat – Smoother Surface Texture

Apply one coat of Laykold ColorCoat Concentrate finish batch mixture using a 24", 30" or 36" 50



Durometer flexible rubber squeegee. Batch mix shall consist of 55 gallons (260 kg) of Laykold ColorCoat Concentrate and 55 gallons (210 kg) 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 Laykold ColorCoat Concentrate per coat.

Each coat should be completely dry before applying subsequent coats. Allow topcoat to cure a minimum of 24 hours before applying game lines.

GAME LINES (1-2 coats as needed)

- A. Wait a minimum of 24 hours after final color coat before applying line paint.
- B. All lines are to be applied by painting between masking tape with a paintbrush or roller according to USA Pickleball. and ASBA. specifications.
- C. Prime masked lines with Laykold Line Prime and allow a minimum drying time of 1-hour.
- D. Apply 1 to 2 coats as needed of Laykold Textured White Line Paint with a brush or roller.
- E. Remove masking tape immediately after lines are dry.
- F. 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

- A. Asphalt substrates shall be allowed to cure a **minimum** of 14 days and concrete substrates shall be allowed to cure a minimum of 30 days before application of any coatings. If time sensitive and/or high RH level is present, an epoxy moisture mitigation primer can be applied to 5-day old (minimum) concrete substrates according to manufacturer guidelines.
- B. If an epoxy moisture mitigation primer is required, concrete substrate must be shot blasted, or hydro blasted to a CSP3 profile. **Minimum requirements are a broom finish and acid etching, if using LM Bond-Kote as an adhesion promoter but shot blasting or hydro blasting is preferred.**
- C. The substrate shall be CLEAN and DRY before coatings are applied. The surface of the substrate shall be inspected and made sure to be free of grease, oil, dust, dirt, and other foreign matter before any coatings are applied.
- D. Water used in all mixtures shall be fresh and potable.
- E. No part of the surfacing system shall be applied during a rainfall, or when rainfall is imminent.
- F. Do not apply coatings to a cold surface. Surface and air temperature must be a minimum of 50°F (10°C) and rising. A minimum temperature of 50°F must be maintained during the entire installation process to include 24-hours before and after the installation.
- G. Shaded areas will be cooler with slower curing times. Special precautions should be taken to



ensure all coatings cure sufficiently prior to application of additional coatings.

- H. Do not apply coatings if extremely high humidity prevents drying.
- I. No coatings are to be applied if surface temperatures exceed 130°F (54°C).
- J. All materials shall be delivered to the job site in sealed containers with the manufacturer's label affixed.
- K. Color(s) of acrylic color coating system is to be selected by owner from manufacturer's product color card(s).
- L. If all the above conditions are met, surfacing materials shall have a (2) two-year limited warranty as supplied by the manufacturer.

Acrylic, all-weather pickleball 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 pickleball systems are NOT capable of solving the problems and/or forces associated with cracked, deteriorating, or damaged substrates.