

Laykold 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 products 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 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 Cushion Plus Component	Maximum Dilution Material to Water	Silica Sand Requirements mesh size/#'s per gallon of concentrated material
Laykold Poly Primer or Laykold Epoxy VTB Primer	None	See Technical Data Sheet
Laykold Acrylic Concrete Primer	1 part to 3 parts	None
Laykold Deep Patch	None	See Technical Data Sheet
Laykold Acrylic Resurfacer*	1 parts to 0.7 part	60-80 / 10-17 #'s per gal.
Cushion Plus Granule	2 parts to 1 part	Do not add sand
Cushion Plus Powder	2 parts to 1 part	Do not add sand
Laykold ColorCoat Concentrate - Texture Mix	1 part to 0.6 parts	70-100 / 5-8 #'s per gal.
Laykold ColorCoat Concentrate - Finish Mix	1 part to 1 part	Do not add sand

- 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.

POT LIFE

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

Laykold Cushion Plus Component	Pot Life
Laykold Poly Primer	40 – 50 Minutes
Laykold Epoxy VTB Primer	15 – 20 Minutes

All other Cushion Plus 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

Prior to application, the existing surface must be thoroughly cleaned, sound, dry, and free of oils and other bond inhibiting contaminants. Spalls, delaminations, potholes, scaling, pop outs, and other defects in the substrate must be addressed and all projections must be leveled prior to the commencement of the surfacing applications.

Once the surface has been thoroughly cleaned and is free of all loose material, dirt, or dust, the court shall be flooded and allowed to drain a minimum of 30 minutes and a maximum of 1 hour. Any area that holds water (birdbaths) in a depth greater than 1/16 inch (1.6 mm) (thickness of a nickel) shall be outlined and patched.

Surface Leveling: Birdbaths shall be leveled using a Laykold Acrylic Deep Patch court patch binder slurry. Prime area to be patched with a 50/50 mixture of Laykold Acrylic Deep Patch and water. Primer shall be brushed into place and allowed to dry prior to patching. Patch mix shall consist of Laykold Acrylic Deep Patch, 50-mesh sand and Type 1 Portland Cement. Mix as per manufacturer directions.

Crack Filling: Cracks shall be cleaned, primed, and filled using Laykold Acrylic Resurfacer if cracks are 1/16 inch or less. If greater than 1/16 inch, Laykold Acrylic Deep Patch court patch binder slurry shall be used to fill cracks. Mix as per manufacturer’s directions. Refer to Laykold Deep Patch technical data sheet for additional mixing details and application instructions for filling various sized cracks.

For applications over asphalt or new concrete, the asphalt and concrete should be allowed to cure a minimum of 30 days and free of any residual moisture. Excessive moisture levels can be determined by taping a 1 yd² (1 m²) clear piece of plastic over the substrate with duct tape. Be sure that all of the edges of the plastic are sealed with the duct tape. Leave the plastic approximately 30 minutes and check for condensation under the plastic. If water appears, repeat the test every 30 minutes until the plastic remains dry.

For applications over existing concrete, mechanical methods (shot blasting, sandblasting, or hydroblasting) are recommended to produce a clean and lightly textured surface. When

hydroblasting, allow 24 hours for substrate to dry completely. Prior to applying each layer of the Laykold Cushion-Plus system, make sure the previous layer is clean and dry.

PRIMER (Concrete Only)

When installing the Laykold system over concrete that meets the RH test result of 75%, use Laykold PU Concrete Primer. Laykold PU Concrete Primer is mixed by pouring the “B” component into the “A” component and mixing using a low speed jiffy mixer (400 to 600 rpm) for 2 minutes. Scrape down the sides of the bucket and mix for an additional minute. Do not incorporate air when mixing. Spread the mixed primer on the substrate using a high-quality, medium nap roller to achieve a total coverage of approximately 0.03 gal/yd² or 300 ft²/gal. Working time for Laykold PU Concrete Primer is approximately 40 – 50 minutes but is reduced in high temperatures. Lightly broadcast 40 to 60 mesh silica sand onto the wet primer at the rate of 5 pounds per 100 sq. ft. (0.24 kg/m²) to create a rough texture. Allow 5 to 7 hours drying time before proceeding to subsequent coats.

When the RH test exceeds 75% relative humidity levels, or for concrete with less than 30 day cure - contact APT for proper use of the Laykold Epoxy Concrete Primer – or reference TDS for proper handling, preparation, and application.

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

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 an acceptable substitute for Laykold Acrylic Resurfacer and is highly recommended for use on new asphalt pavements, older asphalt pavements with hairline surface cracking, slip-sheet/free-floating surfaces, and/or repair methods and over cushioned courts.

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. DO NOT ADD SAND to any cushion coats! 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. DO NOT ADD SAND to cushion coats! 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:

Cushion Plus 6 (layers) – 3 coats granule, 3 coats powder
Cushion Plus 7 (layers) – 4 coats granule, 3 coats powder
More than 7 cushion layers is not recommended.

TEXTURED COLOR COATS (2 coats)

Apply two coats of Laykold ColorCoat Concentrate textured 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, 25 to 35 gallons (95-115 kg) of potable water and 300 to 450 pounds (135-203 kg) of clean, bagged silica sand (70 to 100 mesh). The application rate shall be 0.04-0.05 gal/yd² (0.23-0.29 kg/m² - 180-225 ft²/gal) of undiluted Laykold ColorCoat Concentrate per coat. Each coat should be completely dry before applying subsequent coats. Due to its superior flexibility Laykold ColorFlex is a highly recommended substitute for ColorCoat Concentrate on cushioned courts.

OPTIONAL FINISH COLOR COAT (1 coat)

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 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 game lines. Due to its superior flexibility Laykold ColorFlex is a highly recommended substitute for ColorCoat Concentrate on cushioned courts. A finish coat WILL produce a faster surface pace.

GAME LINES (1-2 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 to dry 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 and concrete substrates is 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).
- ⇒ 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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