

Acrylic Tennis & Recreational Sport Surfaces

MASTERS Color System Specification

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope: This guide specification covers the installation of the Laykold Masters Color system. Advanced Polymer Technology Corporation of Harmony, Pennsylvania, U.S.A provides technical data and guideline specifications only. Consult with a professional engineer or architect for a formal specification. Laykold Masters Color is a premium quality, multi-layered, water-based acrylic emulsion, all-weather, tennis and athletic surfacing system. The Laykold Masters Color system should be applied only to properly prepared concrete or asphalt substrates. This hard court tennis and athletic surface is comprised of LM PU Primer (concrete only), LM FlexFill (new asphalt only), LM Filler, LM TopCoat, LM Line Prime and LM Textured White Line Paint.
- B. Court Construction: Refer to the American Sports Builders Association (ASBA) manual Tennis Courts: A Construction & Maintenance Manual for court construction details. This publication may be obtained by calling the ASBA at 443-640-1042 or visiting www.sportsbuilders.org.

1.2 QUALITY ASSURANCE

- A. All tennis court surfacing materials shall be Laykold Masters Color System as supplied by Advanced Polymer Technology (APT) of Harmony, PA, an ISO 9001 and ISO 14001 certified manufacturer. APT may be contacted via telephone 888-266-4221, fax 724-452-1703, or web sites www.laykold.com and www.advpolytech.com.
- B. All work shall be done in accordance with American Sports Builders Association (ASBA) guidelines.
- C. The contractor shall record the batch number of each product used on the site and maintain it through the warranty period.
- D. The contractor shall provide the inspector, upon request, an estimate of the volume of each product to be used on the site.

1.3 SUBMITTALS

- A. Submit one set of Advanced Polymer Technology "Laykold Masters Color Specifications".
- B. Submit system components Technical Data Sheets (TDS) and one Laykold Color Chart.
- C. Submit current Safety Data Sheets (SDS).
- D. Submit current ISO Quality Management System Certification certificate.

1.4 WORKING CONDITIONS & LIMITATIONS

- A. Asphalt and concrete substrates shall be allowed to cure a minimum of 30 days before application of any coatings.

- B. 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.
- C. Water used in all mixtures shall be fresh and potable.
- D. No part of the surfacing system shall be applied during a rainfall, or when rainfall is imminent.
- E. Do not apply coatings to a cold surface. Surface and air temperatures must be at least 50°F (10°C) and rising.
- F. Do not apply coatings if extremely high humidity prevents drying.
- G. No coatings are to be applied if surface temperatures exceed 130°F (54° C).
- H. All materials shall be delivered to the job site in sealed containers with the manufacturer's label affixed.
- I. Color(s) of acrylic color coating system is to be selected by owner from manufacturer's product color card.
- J. If all the above conditions are met, surfacing materials shall have a Five-Year limited warranty as supplied by the manufacturer.

1.5 WARRANTY

Advanced Polymer Technology Corp. (APT) warrants, subject to limitations, exclusions, terms and conditions contained herein, that the material supplied by APT, and which is covered by this Warranty, will not fail due to defects for five (5) years. APT's maximum responsibility under this Limited Warranty shall be limited to the replacement of material in a quantity not in excess of the quantity of material furnished by APT in connection with the project. No salesman or other employee or agent of APT is authorized to bind APT by any agreement, warranty, promise, or understanding not herein expressed.

This Limited Warranty is made and given in lieu of all other warranties and conditions, expressed or implied, statutory or otherwise, including but not limited to any warranties or conditions of merchantability, durability and of fitness for a particular purpose. Under no circumstances shall APT be liable or otherwise obligated for indirect, incidental or consequential damages of any nature or kind whatsoever, including damages arising in contract, tort, product liability or otherwise.

PART 2 – PRODUCTS

2.1 LAYKOLD MASTERS COLOR SYSTEM COMPONENTS

- A. All components of Laykold Masters Color system shall be supplied by Advanced Polymer Technology, an ISO 9001 and ISO 14001 certified manufacturer. Masters Color system components shall not contain ANY lead, mercury, nor any heavy metals, PCB, or formaldehyde.
- B. LM PU Primer: a two-component polyurethane primer for use on concrete substrates only.

- C. LM FlexFill: a highly flexible acrylic emulsion used for asphalt substrate surface preparation. Used on new asphalt substrates only.
- D. LM Filler: a flexible, factory textured emulsion used as an interface coating.
- E. LM Top Coat: a flexible, pigmented, wear and weather resistant color coat emulsion for use with Laykold Masters Systems.
- F. Laykold Line Prime: a clear drying acrylic emulsion line primer.
- G. Laykold Textured White Line Paint: a factory textured, wear-resistant acrylic line marking paint.

PART 3 – EXECUTION

3.1 INSPECTION

- A. Inspect concrete or asphalt substrate for dryness. Report any discrepancies to general contractor.
- B. Surface of substrate shall be cleaned by general contractor as required.
- C. Surfacing contractor to approve site and surface conditions prior to proceeding with application of any coatings.

3.2 Preparation

- A. New or Existing Concrete
 - 1. Existing concrete surfaces shall be stripped of all previous coatings.
 - 2. Concrete surface to have light broom finish.
 - 3. 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 1/8 inch below a 10-foot straight edge when measured by any random path.
 - 4. New concrete shall be cured for a minimum of 30 days before proceeding.
 - 5. 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.
 - 6. 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. The surface area should also be scraped and then brushed with a broom. When an acid wash is required follow the manufactures instructions thoroughly, wash area with water using a stiff bristle broom.

7. 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 6-mil and where overlap is required or at any taped joints a minimum of 6 ". Once the installation is completed do not allow any traffic (including vehicular) onto the surface.

B. New Asphalt

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 1/8 inch below a 10-foot straight edge when measured by any random path.
2. New asphalt shall be allowed to cure for a minimum of 30 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. If necessary, pressure wash the surface to remove any residues. The surface area should also be scraped and then brushed with a broom.

C. Existing Asphalt Surfaces

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.
2. 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. The surface area should also be scraped and then brushed with a broom.

3.3 INSTALLATION

- A. LM PU Primer: Must be used when installing the Laykold Masters Color system over new or existing concrete substrates. LM PU 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 0.025 gal/yd² (0.12 kg/m² - 360 ft²/gal). The working time for LM PU Primer is approximately 40 - 50 minutes and 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.

Laykold Epoxy VTB must be used when installing a Laykold Masters system over new concrete substrates where RH value exceeds 75% according to ASTM F 2170. Laykold Epoxy VTB 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 Laykold Epoxy VTB on the substrate using a notched trowel and high-quality, medium nap roller to achieve a total coverage of approximately 0.10 gal/yd² (0.50 kg/m² - 90 ft²/gal). The working time for Laykold Epoxy Primer is approximately 40 - 50 minutes and is reduced in high temperatures. Allow 16 to 18 hours drying time before proceeding with LM Bond-Kote.

Bonding: Mix the LM Bond-Kote to ensure consistency, and apply using an 18" roller, at the rate of 0.5 -0.6 gal/yd² or 130-150 ft²/gal. Allow the LM Bond-Kote to cure before proceeding.

NOTE: due to the ammonia content in the Laykold Interface, a full face respirator with ammonia compliant cartridge is recommended during application.

- B. Patching: 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 20 minutes and a maximum of 1 hour. Any area that holds water (birdbaths) in a depth greater than 1/8 inch shall be outlined and patched.
 - 1. Surface Leveling: Birdbaths shall be leveled using a Laykold Acrylic Deep Patch court patch binder slurry. Prime area 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.
 - 2. 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 should 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.
 - 3. All areas that are repaired/leveled/corrected using a court patch binder mixture shall be allowed to fully cure and then ground smooth and level with the substrate by stone or an acceptable mechanical method.
- C. LM FlexFill: New asphalt substrates (only) are to be coated with two applications of LM FlexFill. Batch mix is to consist of 55-gallons of LM FlexFill, 400 to 500-lbs of 50 to 70 mesh graded silica sand, and 25-gallons of potable water. Each application is to be applied with a soft rubber squeegee at a rate of 0.05-0.07 gal/syd (0.25-0.35 kg/sm - 129 to 180 sf/gal).
- D. Install Laykold Masters Color system according to guidelines provided by Advanced Polymer Technology Corp., Harmony, PA.

3.4 PROTECTION

- A. Cure Time. No traffic or other trades shall be allowed on the surface for a period of one week following completion to allow for complete and proper cure of the finish.
- B. Other Trades. It is the responsibility of the general contractor to protect the surface from damage by other trades before acceptance by the owner or the owner's authorized agent.
- C. Do not allow surrounding sprinkler systems to spray water on the newly applied court surface for a period of one week after completion.

- D. Do not place any benches, chairs, ball baskets, or any other type of court equipment on the newly applied court surface for a period of one week after completion.
- E. Do not allow black soled shoes, bicycles, rollerblades, etc. on the court surface. Black scuff marks cannot be removed!

3.5 **MAINTENANCE**

- A. Dirt Contamination
 - 1. Broom, wash or blow dirt off court on a regular basis.
 - 2. Annual pressure washing of court surface is recommended.
 - 3. Most dirt and stains can be removed with a neutral pH cleaner used in proper dilution. Pre-test cleaner on small area in corner of court.
- B. Proper maintenance procedures and housekeeping practices should be performed on a timely as needed basis.

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.