Diama-Deck DTW
SYSTEM DATA SHEET

Version Number: 100-04

DESCRIPTIONS

DiamaPro Systems® Diama-Deck DTW (Direct to Wood) is a durable, cost-effective, and low-maintenance system ideal for new construction and restoration projects that require waterproofing over wood deck construction. Its high-solids acrylic co-polymer admixture improves adhesion, flexibility, and waterproofing characteristics. The final texture coat provides an architectural design option, adding a wide range of textures and colors.

ADVANTAGES

- Meets USDA, FDA, EPA, and SCAQMD Standards
- Eligible for LEED Points: Made in California from Partially Recycled Materials
- Adhesion to Concrete, Wood, Metal, Non-glazed Tiles
- High Impact Resistance
- High Traffic and Hot Tire Resistance
- Low Maintenance
- Low Odor
- Flexibility
- UV Resistance
- Waterproofing

SUGGESTED USES AND APPLICATION AREAS

- Over elevated wood structures
- Slope, Skim/Screed, Slurry, Mortar, and Reinforced Waterproofing
- Decorative Appearance
  - Knockdown/Orange-peel Texture
  - Simulated tile.
  - Decorative staining
  - Color
- Industrial, Healthcare, Commercial, Government, Institutional, and Residential

FINISH

- Matte Finish – Clear
- Matte Finish with Color
- Gloss Finish – Clear
- Gloss Finish with Color

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LIMITATIONS

- To protect exposed metal lath and staples from corrosion, apply the first coat.
- immediately after installing the metal lath. This is especially important in salty environments.
- All repairs must be completed before installing any system.
- DO NOT apply single coat greater than 2" thick.
- Do not let material puddle on floor.
- Complete samples and onsite mockups to ensure desired results are achieved.
- Application temperatures
  - When temperatures increase or humidity decreases, material cures faster.
  - When Temperatures decrease, material cures slower.
- If application temperatures are outside of those recommended, contact your DiamaPro Systems® Technical Representative.
- DO NOT apply under direct sunlight.
- DO NOT install under inclement weather conditions.

SAFETY AND TESTING

- Safety
  - Personal protective equipment and safety conditions must be considered before using any product.
  - Review all relevant and current documentation including Safety Data Sheets.
- Testing
- Review Pre- and Post Job Checklists.
- Before installation: Test and look for any unknown site conditions and/or defects.
- To ensure desired results are achieved, the system should be tested in a small area on site before full installation begins.

STORAGE AND APPLICATION TEMPERATURES

Ideal Storage Environment	Dry, Out of Direct Sunlight, 60-80°F
Material Temperature During Application	50-70°F and 5°F Above Dew Point
Minimum Substrate Temperature During Application	5°F Above Dew Point
Recommended Application Temperature	45-100°F, 5-85% RH (Relative Humidity)

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TECHNICAL DATA

PROPERTIES WHEN FULLY CURED

DiamaPro Systems® Diama-Deck Base Coat

PROPERTIES	TEST METHOD	TYPICAL VALUES
Tensile Strength	ASTM C190	400-500 psi
Compressive Strength	ASTM C109	2,500-3,500 psi
Vapor Permeability	ASTM E 96	1.0-3.0 perms
Fire Resistance	ASTM E648	class 1
Flammability	ASTM D635	self-extinguishing
Adhesion	ASTM D4541	100% substrate failure
Weathering	ASTM G23	no visible degradation
Salt Spray/Fog (1,000 Hours Exposure)	ASTM B117	no visible degradation
Impact Resistance	MIL-D-3134	>160 in-lbs.
Freeze-Thaw Resistance (50 Cycles)	ASTM C67	no scaling/peeling/flaking
Dynamic Coefficient of Friction (Wet/Dry)	ANSI A326.3	0.50-0.60 (wet), 0.65-0.75 (dry)

DiamaPro Systems® Diama-Cryl

PROPERTIES	TEST METHOD	TYPICAL VALUES
Abrasion Resistance	ASTM D4060	70 mg loss
Abrasion Resistance with Anti-Slip	ASTM D4060	40-60 mg loss
Flame Spread/ Critical Flux	ASTM E648	Class 1
Flame Spread/ Rate of Burning	ASTM D635	Self-extinguishing
Indoor Air Quality	CA 01350	Compliant
Microbial Resistance	ASTM G21	Passes, 0 growth
Moisture Vapor Emission Rate	ASTM F1869	<3 lbs.
Moisture Vapor Permeance	ASTM E96	0.08 perms
Relative Humidity	ASTM F2170	<80%
UV Resistance	ASTM D4587	Level 1
Water Absorption	ASTM D570	<0.05%

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CHEMICAL AND STAIN RESISTANCE

1 = Best for chemical resistance: No adverse effects on fully cured coating; Remove within 24 hours.
2 = Low potential for stain: No adverse effects on fully cured coating if removed within 24 hours.
3 = High potential for stain or degradation: Must be removed within 24 hours of exposure.
NR = Not recommended

Acetic Acid (Component of Vinegar), 10%	1	MEK (Methyl Ethyl Ketone)	NR
Acetic Acid, 30%	NR	Methanol	NR
Acetone	NR	Methylene Chloride	NR
Ammonia, 30%	NR	MIBK (Methyl Isobutyl Ketone)	NR
Ammonium Hydroxide, 30%	NR	Mineral Oil	1
Antifreeze (Coolant)	2	Motor Oil, SAE 30	1
Benzene (Component of Crude Oil)	3	Mineral Spirits	NR
Benzyl Alcohol	NR	Mustard, Yellow	3
Betadine, 11%	NR	Nitric Acid, 30%	NR
Boric Acid, 4%	NR	Oleic Acid	1
Brake Fluid, DOT 3	1	Oxalic Acid, 10%	1
Chromic Acid, 10%	3	Phosphoric Acid, 20%	NR
Chromic Acid, 30%	NR	Potassium Hydroxide, 30%	3
Citric Acid, 30%	1	Propylene Glycol	1
Ethanol, 95%	NR	Silver Nitrate, 20% (Photo Labs)	NR
Ethyl Acetate, 99% (Food/Beverage Facility)	NR	Sodium Chloride, 20%	1
Formaldehyde, 37%	NR	Sodium Hydroxide (Caustic Soda), 50%	1
Premium Gasoline	1	Sodium Hypochlorite (Bleach), 10%	NR
Hydraulic Fluids (Machinery, Automobile, Aviation)	2	Sodium Hypochlorite (Bleach), 30%	NR
Hydrochloric Acid, 10%	3	Sodium Persulfate	3
Hydrochloric Acid, 30%	3	Sulfuric Acid, 37% (Battery Acid)	NR
Hydrofluoric Acid, 10%	NR	Tannic Acid, 20%	3
Hydrofluoric Acid, 30%	NR	Tartaric Acid, 10%	3
Hydrogen Peroxide, 10%	NR	Transmission Fluid	2
Hydrogen Peroxide, 50%	NR	Urine, Dog or Cat	2
Iodine, 2%	3	Urea (Nitrogen-Rich Fertilizer)	1
Isopropyl Alcohol	NR	Vinegar, Distilled	1
Jet Fuel	1	Water (Hard Water from Well)	1
Lactic Acid, 30% (Dairy Facility)	NR	Whisky	2
Lime Juice	2	Wine, Cabernet Sauvignon	2
Magnesium Hydroxide	1	Xylene	NR

COVERAGE RATES PER KIT – DIAMAPRO SYSTEMS® DIAMA-DECK BASE COAT

NOMINAL THICKNESS	COVERAGE RATE
1/8"	48 SF/KIT
1/4"	24 SF/KIT
3/8"	16 SF/KIT
1/2"	12 SF/KIT
3/4"	8 SF/KIT
1"	6 SF/KIT

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COMPONENTS AND COVERAGE RATES

Wire Lath	Hot dipped galvanized metal Minimum 2.5 lbs./sq.ft. Complies with ASTM C847	Cover entire area.
Staples	Corrosion resistant 16 ga., 5/8" long, 7/8"-1.00" crown Comply with ASTM 1667	Minimum 12 staples/sq.ft. Lath overlaps – 1.00" apart Maximum 2.00' apart over plywood seams
Base Coat	**DiamaPro Systems® Diama-Deck Concentrate** Part A (1 gal.) **DiamaPro Systems® Diama-Deck Base** Part B (50 lbs.)	30 sq.ft./kit
Saturation Coat	**Fiber Lath** **DiamaPro Systems® Diama-Deck PrimeBond** (45 sq.ft./gal.)	Place Fiber lath – overlapping ½." Saturate with Prime Bond
Screed Coat	**DiamaPro Systems® Diama-Deck Concentrate** Part A (1 gal.) **DiamaPro Systems® Diama-Deck Texture Smooth Part** B (50 lbs.)	100 sq.ft./kit
Texture Coat	**DiamaPro Systems® Diama-Deck Concentrate** Part A (1 gal.) **DiamaPro Systems® Diama-Deck Texture Smooth** Part B (50 lbs.)	125-175 sq.ft./kit Hopper gun or pool trowel application
Seal Coat	**DiamaPro Systems® Diama-Deck Cryl (5 gal.)** Accent, Medium or Deep Base Colorant: 1 pack / 5 gals.	200 sq.ft./gal.

- Coverage rates are for estimating purposes only.
- Factors such as waste, unusual/abnormal substrate conditions, and other unforeseen job-site conditions may affect actual product yields and are the responsibility of the installer.

INSTALLATION INSTRUCTIONS

SURFACE PREPARATION

- Plywood
  - Plywood Substrate Must Be structurally sound, clean, and dry.
  - Plywood must be installed in accordance with the applicable code. Minimum 5/8"-thick exterior grade.
- Drainage
  - Sloped for proper drainage with minimum slope: 1/4" vertical to 12" horizontal (2%).
  - Adequate drainage must be provided in accordance with the applicable code.
- Joints and Seams
  - Joints should be tongue-and-grooved or blocked with 2"-by-4" boards.
  - All non-tongue-and-grooved joints must be gapped 1/8".
    - Apply to all plywood seams a 1/4"-high bead of caulk and tool flat.
  - Sand all joints smooth that show an elevation difference.
- Terminations
  - All valleys, openings, parapets, walls, sliders, door thresholds, jambs, posts, scuppers,
  - penetrations, fascia, and adjuncts must be flashed and caulked.

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- Metal Flashing
  - Follow manufacturer's instructions to secure metal flashing to plywood and caulk terminations.
  - Apply according to appropriate building codes.
- Cleaning
  - Vacuum well, removing all imbedded dust and debris that would prevent adhesion of the coating.

- Metal Lath and Staple Installation
  - Install metal lath with edges parallel to plywood.
  - Overlap
    - Lath must cover the entire substrate and overlap metal flashing by 1.5" inches or more.
    - At joints, lath must overlap by at least 3/4".
  - Staples:
    - Lath must be secured with at least 12 staples per square foot.
    - Staples must be no more than 1 inch apart where metal lath overlaps and no more than 2 inches apart anywhere the lath overlaps.
  - Plywood Seams
    - Staples must be perpendicular to joints and should bridge across caulking.
  - System Installation
    - Any sloping or crickets must be done before you apply the waterproofing system.

MIXING

- Combine components according to mix instructions.
- Continue mixing until the coating's consistency is uniform.
- The coating must remain thoroughly mixed during the application.
- Keep a wet edge while applying product.
- Wear spiked shoes when walking on material.

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DiamaPro Systems® Diama-Deck Base Coat

Standard Kit Mix Ratio	DiamaPro Systems® Diama-Deck Concentrate Part A – 1 gal. DiamaPro Systems® Diama-Deck Base Part B – 50 lbs.
Accelerant: DiamaPro Systems® Diama-Deck Additive Fast	1 oz. per standard kit
De-accelerant/Viscosity Reducer: DiamaPro Systems® Diama-Deck Additive Slow	1 oz. per standard kit
Mixing Drill	High-RPM, high-torque drill Jiffler double-bladed mixing paddle
Mixing Directions	Slowly add Part B to Part A and mix for 2 minutes or until consistency and color are uniform.
Mixing Directions with Accelerant, or De-accelerant	Mix Part A and additive for 30 seconds. Slowly add Part B and continue mixing until consistency and color are uniform.

DiamaPro Systems® Diama-Deck PrimeBond / DiamaPro Systems® Diama-Deck Base (Fiber Coat)

Body Coat	50 lbs. DiamaPro Systems® Diama-Deck Base 5 gallons of DiamaPro Systems® Diama-Deck PrimeBond
Mixing Drill	Low-RPM, low-torque drill Jiffler double-bladed mixing paddle
Mixing Drill when mixing Diama-Deck Base Coat	High-RPM, High-torque drill Jiffler double-bladed mixing paddle

DiamaPro Systems® Diama-Deck Cryl

Standard Kit Mix Ratio	DiamaPro Systems® Diama- Cryl 5-gal. 16 oz – Colorant
Colorant	Waterborne Colorant – 16 oz.
Matting Additive	1-3 lbs./gal.
Anti-Slip: Bead 50 **Bead 100** **Tex 50**	12-16 oz./gal.
Mixing Drill	low-RPM, low-torque drill Jiffler double-bladed mixing paddle
Mixing Tool(s)	Paint mixer sticks to scrape the bucket sides
Mixing Directions	Mix base and colorant for 5 minutes or until color is uniform
Mixing Directions with Matting Additive	Mix additive with **DiamaPro Systems® Diama-Cryl** Mix until consistency is uniform.

Diama-Cryl Color Choice – Light Base, Medium Base or Deep Base

AVERAGE APPLICATION TIME

DiamaPro Systems® Diama-Deck Base/Texture Coat

Ambient Temperature	45-100°F, 5-85% RH
Working Time	20-25 min
Recoat Window	2-24 hrs.
Return to Service (Foot Traffic)	24 hrs.
Full Cure (Vehicle Traffic)	28 days

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DiamaPro Systems® Diama Deck-PrimeBond

Ambient Temperature	35-100°F, 80 % RH	50°F, 50 % RH	70°F, 50 % RH	100°F, 50 % RH
Working Time	20-25 min	30-35 min	20-25 min	10-15 min
Recoat Window	2-48 hrs.	2-48 hrs.	2-24 hrs.	2-24 hrs.
Return to Service (Foot Traffic)	24-48 hrs.	24-28 hrs.	24-48 hrs.	24 hrs.
Full Cure (Vehicle Traffic)	7 days	7 days	7 days	7 days

DiamaPro Systems® Diama-Cryl

Ambient Temperature	35-100°F, <80% RH	50°F, 50 % RH	70°F, 50 % RH	100°F, 50 % RH
Working Time	20-25 min	30-35 mins	20-25 mins	10-15 min
Recoat Window	2-48 hrs.	2-48 hrs.	2-48 hrs.	2-24 hrs.
Return to Service (Foot Traffic)	24-48 hrs.	24-48 hrs.	24-48 hrs.	24 hrs.
Full Cure (Vehicle Traffic)	7 days	7 days	7 days	7 days

INSTALLATION

- Prepare the surface including caulking the joints and installing the flashing and wire lath.
- **Base Coat**
  - DiamaPro Systems® Diama-Deck Base / DiamaPro Systems® Diama-Deck PrimeBond
    - Spread evenly using a pool trowel.
      - 30 sq.ft./kit
    - Once dry, sand and smooth any imperfections.
    - Remove all debris.
- Fiber Coat
  - Fiber Lath
    - Cut and lay the Fiber Lath covering base coat.
    - Lath should lap 2.00” over flashing.
    - Lath should overlap 1.00” over plywood seams.
    - Keep the Fiber Lath from inside and outside edges.
- Saturation Coat
  - DiamaPro Systems® Diama-Deck PrimeBond / DiamaPro Systems® Diama-Deck Base
    - Saturate the Fiber Lath with the mixture**.**
    - Use a flexible flat or flat ridged blade to smooth the saturated Fiber Lath.
      - 45 sq.ft./gal.
    - If mat curls, use a metal, fiberglass laminating roller to flatten.
    - Allow to cure.
- Screed Coat
  - DiamaPro Systems® Diama-Deck Texture Smooth
    - Spread evenly using a pool trowel.

- 100 sq.ft./kit
- When application is dry, sand and smooth any imperfections.
- Remove all debris.

- Texture Coat
  - DiamaPro Systems® Diama-Deck Texture Smooth
    - Flat Trowel / Skip Trowel Finish
      - Apply with a pool trowel.
      - 125-175 sq.ft./kit
    - Knockdown finish
      - Apply with a hopper gun.
      - 10-60 psi.
      - Lower the pressure, produces larger splatter droplets.
      - Use a finishing trowel, flatten the high points.
      - 125-175 sq.ft./kit

- Seal Coat
  - DiamaPro Systems® Diama-Cryl
    - Gloss – Clear
    - Gloss with Color
    - Matte – Clear
    - Matte with Color
    - Apply with a microfiber 3/8” nap roller.
    - 200 sq.ft./gal.

CLEAN UP

- Allow the unused material to cure in the mixing vessels.
  - Discard the mixing vessels according to the Federal, State and Local regulations.
- Uncured material can be cleaned up using water.
- Properly discard any rags that might have been used.
- Cured material needs to be mechanically removed from mixing paddles.

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MAINTENANCE AND CLEANING

- Daily
  - Sweep, removing all abrasives and remove stain producing liquids as soon as they happen.
- Auto-scrubber
  - Fit with a soft, non-abrasive white pad.
  - Use **DiamaPro Systems® Diama-Clean 30** in the freshwater tank according to the materials dilution rate.
- Mop and Bucket
  - Use **DiamaPro Systems® Diama-Clean 30** diluted in the freshwater.

AVAILABILITY

DiamaPro Systems® Diama-Deck DTW System is only available through DiamaPro Systems® Authorized Distributors and Applicators. For a list of Authorized Distributors please contact DiamaPro Systems®.

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TECHNICAL SERVICES

The DiamaPro Systems® office offers assistance with specifications, performance test data and field services.

DISCLAIMER

Every effort has been made to ensure the accuracy of the above information and to avoid infringement of any patent or copyright. The information is based on field tests by government and private agencies, as well as lab tests, and on technical data from raw material manufacturers.

The person(s) specifying or requesting the use of these products is responsible for assuring their suitability for a specific use, as well as the proper application of the products.

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