Diama-Flow RC

Item Number: DPDFRC – 100-01

DiamaPro® Diama-Flow RC (Roll Coat) is an easy-to-apply 100%-solids, 3-component roller-applied system. When application temperatures are high or low, use it to protect areas that are prone to hot and cold industrial power washing, high abrasion, extreme temperatures, and aggressive chemical and thermal attacks. **DiamaPro® Diama-Flow RC** outperforms and outlasts epoxy, tile, VCT, concrete, and urethane-sand under extreme industrial conditions.

ADVANTAGES

- Moisture Vapor Resistance (up to 25 Pounds MVER and 99% RH)
- Antibacterial
- 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
- Easy Installation
- High Impact Resistance
- Low Maintenance
- Low Odor
- Long Working Time
- Self-priming
- Thermal Shock Resistance
- Waterproofing

SUGGESTED USES AND APPLICATION AREAS

- Primer Coat
- Decorative Systems
- Seamless Moisture Mitigation
- Industrial, Healthcare, Commercial, Government, Institutional, and Residential

DiamaPro® AVAILABLE SYSTEMS

- DiamaPro® Diama-Flake System
- DiamaPro® Diama-Quartz System
- DiamaPro® Diama-ESD Coating System
- DiamaPro® Diama-Metallic System

FINISH AND COLOR

- Matte Opaque
- Matte Opaque with Pigment

PRECAUTIONS AND LIMITATIONS

- Coating will amber over time.
- When color stability is important, use **DiamaPro® Diama-Poly, DiamaPro® Diama-Thane HPU** or **DiamaPro® Diama-Thane NGU** as the Topcoat.
- As a Primer
  - May be required when the substrate is highly absorbent.
  - When outgassing is suspected or prevalent.
  - When the substrate is very porous.
  - When the substrate is in poor condition.
- All concrete repairs must be completed before installing any system.
- Do not allow the material to puddle on floor.

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- Complete samples and onsite mockups to ensure desired results are achieved.
- Application Conditions
  - When temperatures increase, material cures faster.
  - When temperatures decrease, the material cures slower.
  - Apply material when temperature is decreasing.
  - Adhere to the DiamaPro® Dew Point Calculation Chart.
  - DO NOT apply under direct sunlight.
  - DO NOT install under inclement weather conditions.
- If application temperatures are outside of those recommended, contact your DiamaPro® Technical Representative. Application times are based on test results compiled by lab technicians in a controlled setting.
- 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.
- For best results, apply when application temperatures and relative humidity are low.

COMPONENTS

- Standard Kit
  - Part A: 12 lbs. (Liquid)
  - Part B: 12 lbs. Fast Cure, Standard Cure , Slow Cure (Liquid)
  - Part C: 12 lbs. (RC Powder)

SAFETY AND TESTING

- Safety
  - Personal protective equipment and safety conditions must be worn when installing the systems.
  - Review all relevant and current documentation including Safety Data Sheets.
- Testing: 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.

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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

AVERAGE APPLICATION TIME

DiamaPro® Diama-Flow SL Fast Cure

Ambient Temperature	40-80°F <45% RH	50°F 50% RH	70°F 50% RH	100°F 50% RH
Working Time	10 min	20 min	10 min	5 min
Recoat Window	3 hrs.	8 hrs.	3 hrs.	2 hrs.
Return to Service (Foot Traffic)	2-5 hrs.	10 hrs.	6 hrs.	4 hrs.
Full Cure (Vehicle Traffic)	3 days	3 days	3 days	3 days

DiamaPro® Diama-Flow SL Standard Cure

Ambient Temperature	40-80°F <45% RH	50°F 50% RH	70°F 50% RH	100°F 50% RH
Working Time	20 min	30 min	20 min	10 min
Recoat Window	8 hrs.	12 hrs.	8 hrs.	6 hrs.
Return to Service (Foot Traffic)	12-16 hrs.	24 hrs.	16 hrs.	10 hrs.
Full Cure (Vehicle Traffic)	5 days	5 days	5 days	5 days

DiamaPro® Diama-Flow RC Slow Cure

Ambient Temperature	60-90°F <80% RH	50°F 50% RH	70°F 50% RH	100°F 50% RH
Working Time	30 min.	40 min.	30 min.	20 min.
Recoat Window	12 hrs.	24 hrs.	12 hrs.	10 hrs.
Return to Service (Foot Traffic)	24-36 hrs.	36 hrs.	24 hrs.	24 hrs.
Full Cure (Vehicle Traffic)	7 days	7 days	7 days	7 days

SURFACE PREPARATION

- The substrate must be sound.
- All necessary repairs have been completed.
- The substrate must be clean, dry, and free of any bond inhibiting contaminates.
- When applying directly over concrete, the substrate must be mechanically profiled to ICRI CSP.
- Different projects require a different CSP level. Contact your DiamaPro® Technical Representative.
- Adhere to International Concrete Repair Institute current standards.

MIXING AND APPLICATION

Mix Ratio	Part A: 12 lbs. Part B: 12 lbs. Part C: 12 lbs.
Colorant	8 oz per single kit
Accelerant (at 70°F, decreases working time by 5 min, return to service by 1 hr.)	2-4 oz Poly Accelerant per single kit
Mixing Drill	High-speed, high-torque drill Jiffy-style double-bladed mixer

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Mixing Directions	Mix Part A for 15 seconds. Slowly add Part C and mix for 2 minutes or until consistency is uniform. Add Part B and mix for 30 seconds or until color and consistency are uniform.
Mixing Directions with Colorant	Mix Part A and colorant for 15 seconds. Slowly add Part C and continue mixing for 2 minutes or until consistency is uniform. Add Part B and mix for 30 seconds or until color and consistency are uniform.

Coverage Rates

Refer to the **DiamaPro® Diama-Flow RC System** installation guide for project-specific coverage rates.

PROPERTIES WHEN FULLY CURED

PROPERTIES	TEST METHOD	TYPICAL VALUES
Abrasion Resistance	ASTM D4060	70 mg loss
Abrasion Resistance with Anti-Slip	ASTM D4060	40-60 mg loss
Adhesion Strength	ASTM D4541	>500 psi, concrete failure
Compressive Strength	ASTM C579	7,000 psi
Flame Spread/ Critical Flux	ASTM E648	Class 1
Flame Spread/ Rate of Burning	ASTM D635	Self-extinguishing
Flexural Modulus of Elasticity	ASTM C580	3.5 x 10^6 psi
Flexural Strength	ASTM C580	2,700 psi
Hardness (Shore D)	ASTM D2240	80
Impact Resistance	ASTM D2794	>160 in-lbs
Indoor Air Quality	CA 01350	Compliant
Linear Shrinkage	ASTM C531	0.20%
Microbial Resistance	ASTM G21	Passes, 0 growth
Moisture Vapor Permeance	ASTM E96	0.15 perms
Tensile Strength	ASTM C307	2,000 psi
Thermal Coefficient of Linear Expansion	ASTM C531	2.0 x 10^(-)5 in/in/°F
Thermal Shock Resistance	ASTM C484	50 cycles, no cracking
Water Absorption	ASTM C413	<0.10%

CHEMICAL AND STAIN RESISTANCE

1 = Best for chemical resistance: No adverse effects; Must remove within 24 hours.
2 = Low potential for stain: No adverse effects: Must be removed within 24 hours.
3 = High potential for staining: Must be removed within 24 hours of exposure.
NR = Not recommended

Acetic Acid 10%	1	Chromic Acid, 30%	1
Acetic Acid, 30%	2	Citric Acid, 30%	1
Acetone	1	Ethanol, 95%	3
Ammonia, 30%	1	Ethyl Acetate, 99%	NR
Ammonium Hydroxide, 30%	1	Formaldehyde, 37%	2
Antifreeze (Coolant)	1	Premium Gasoline	1
Benzene	3	Hydraulic Fluids	1
Benzyl Alcohol	3	Hydrochloric Acid, 10%	1
Betadine, 11%	2	Hydrochloric Acid, 30%	1
Boric Acid, 4%	3	Hydrofluoric Acid, 10%	1
Brake Fluid, DOT 3	1	Hydrofluoric Acid, 30%	1
Chromic Acid, 10%	1	Hydrogen Peroxide, 10%	1

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Hydrogen Peroxide, 50%	3	Potassium Hydroxide, 30%	1
Iodine, 2%	3	Propylene Glycol	1
Isopropyl Alcohol	1	Silver Nitrate, 20% (Photo Labs)	3
Jet Fuel	1	Sodium Chloride, 20%	1
Lactic Acid, 30% (Dairy Facility)	1	Sodium Hydroxide	1
Lime Juice	1	Sodium Hypochlorite 10%	2
Magnesium Hydroxide	1	Sodium Hypochlorite 30%	2
MEK (Methyl Ethyl Ketone)	NR	Sodium Persulfate	2
Methanol	NR	Sulfuric Acid, 37% (Battery Acid)	1
Methylene Chloride	3	Tannic Acid, 20%	2
MIBK (Methyl Isobutyl Ketone)	NR	Tartaric Acid, 10%	1
Mineral Oil	1	Transmission Fluid	1
Motor Oil, SAE 30	1	Urine, Dog or Cat	1
Mineral Spirits	NR	Urea (Nitrogen-Rich Fertilizer)	1
Mustard, Yellow	3	Vinegar, Distilled	1
Nitric Acid, 30%	2	Water (Hard Water from Well)	1
Oleic Acid	1	Whisky	1
Oxalic Acid, 10%	1	Wine, Cabernet Sauvignon	1
Phosphoric Acid, 20%	1	Xylene	3

Colorants

- May affect working times.
- May reduce chemical resistance.
- May increase potential for stain.
- Coatings tested at ambient temperature over 1-3 days' exposure to chemical.
- To ensure desired results are achieved, products should be tested on site before installation.

Availability: DiamaPro® Diama-Flow RC 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.

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