



Diamapro-Epoxy

Item Number: DCEP – 100-01

DESCRIPTION

Diamapro® Diamapro-Epoxy Part A is the base resin for all Diamapro® Diamapro-Epoxy formulations. When combined with the appropriate Part B, it is a 100%-solids resinous system that can be applied in mid- to high-temperature environments, offering multiple set times. Being highly versatile, this system can be used as a primer, body coat, or topcoat. It's adhesion to concrete is exceptionally high with 24-hour return-to-service and 7 days to full cure.

When Diamapro® Diamapro-Epoxy Part A is combined with Diamapro® Diamapro-Epoxy MVR Part B, it can be applied on concrete with a Moisture Vapor Emissions Rate (MVER) up to 25 lbs. and RH up to 99%. This moisture vapor resistant system has high adhesion to concrete and a long working time – decreasing the risk of roller and brush marks.

ADVANTAGES

- Diamapro® Diamapro-Epoxy can withstand up to 10 lbs. of vapor.
- Diamapro® Diamapro-Epoxy MVR can withstand up to 25 lbs. of vapor.
- Multiple cure times available to meet the needs of the project.
- Meets USDA, FDA, EPA, and SCAQMD Standards
- Anti-bacterial
- Eligible for LEED Points: Made in California from Partially Recycled Materials
- Adhesion to Concrete, Wood, Metal, Non-glazed Tiles
- High Traffic and Impact Resistance
- Low Maintenance
- Low Odor
- Waterproofing

SUGGESTED USES AND APPLICATION AREAS

- Primer
- Elevated Moisture Vapor Emissions Rate (MVER)
- Slurry, Mortar, and Decorative Systems
- Industrial, Healthcare, Commercial, Government, Institutional, and Residential

Diamapro Systems® USING Diamapro® Diamapro-Epoxy

- Diamapro® Diamapro-Flake System
- Diamapro® Diamapro-Quartz System
- Diamapro® Diamapro-Coat ESD System
- Diamapro® Diamapro-Metallic

FINISH AND COLOR

- Gloss Clear
- Opaque when Pigmented

COMPONENTS

- Part A: Resin – 1-10 gal. units
- Part B: Catalyst – ½-5 gal. units

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	60-95°, < 90%



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SAFETY AND TESTING

- Safety
 - Personal protective equipment (PPE) and safety conditions must be considered before using any product.
 - Review all relevant and current documentation including Safety Data Sheets.
- Testing: Before installation:
 - Evaluate the site for any unknown 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.

LIMITATIONS

- Coating will amber over time.
- If color stability is important, use UV-stable **Diamapro® Diamapro-Poly, Diamapro® Diamapro-Thane NGU or Diamapro® Diamapro-Cryl.**
- Primer
 - May be required if the substrate is highly absorbent.
 - When outgassing is suspected or prevalent.
 - When concrete is very porous or in poor condition.
- All concrete repairs must be completed before installing any system.
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- DO NOT apply single coat greater than 1/8" (25 SF/gal).
- DO NOT allow material puddling on floor.
- Complete onsite mockups to ensure desired results are achieved.
- Application temperatures
 - When temperatures increase, material cures faster.
 - When temperatures decrease, material cures slower.
- If application temperatures are outside of those recommended, contact your Diamapro® Technical Representative.

COVERAGE RATES

- For estimating purposes only.
- Waste, unusual/abnormal substrate conditions, and other unforeseen job-site conditions may affect actual product yields.
- Final coverage rates are the responsibility of the installer.

PART B COMPONENTS (Combined with Part A)

Product (B component)	MVR-Slow Cure	MVR-Fast Cure	Slow Cure	Standard	Fast Cure
Application Temperature	60-95°F <90% RH	41-77°F <90% RH	60-110°F <90% RH	60-95°F <90%RH	41-85°F 90% RH
Working Time	25-30 min.	15 min.	40-50 min.	25-35 min.	15-20 min.
Recoat Time	8.5-24 hrs.	3-16 hrs.	9-36 hrs.	7.5-36 hrs.	5.5-24 hrs.
Return to Service	24 hrs.	5-6 hrs.	24 hrs.	24 hrs.	10 hrs.
Full Cure	7 days	5 days	7 days	7 days	5 days



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- To ensure desired results are achieved, products should be tested on site before installation.
- Keep a wet edge while applying product.

PROPERTIES WHEN FULLY CURED (Combined with all Part B components)

PROPERTIES	TEST METHOD	TYPICAL VALUES
Abrasion Resistance	ASTM D4060	40 mg loss
Abrasion Resistance with Anti-Slip	ASTM D4060	24-30 mg
Adhesion Strength	ASTM D4541	400 psi, concrete failure
Adhesion Strength	ASTM D4541	400 psi, vinyl failure
Adhesion Strength	ASTM D4541	500 psi, natural quartz failure
Adhesion Strength	ASTM D4541	450 psi, color quartz failure
Compressive Strength	ASTM D695	13,700 psi
Flame Spread/Critical Flux	ASTM E648	Class 1
Flame Spread/Rate of Burning	ASTM D635	Self-extinguishing
Flexural Strength	ASTM D790	9,000 psi
Hardness (Shore D)	ASTM D2240	85
Impact Resistance	ASTM D2794	120 in-lbs
Indoor Air Quality	CA 01350	Compliant
Microbial Resistance	ASTM G21	Passes, 0 growth
Modulus of Elasticity	ASTM D790	5.0 x 10 ⁵ psi
Moisture Vapor Permeance	ASTM E96	0.08 perms
Tensile Elongation at Break	ASTM D638	5%
Tensile Strength	ASTM D638	7,800 psi
Thermal Coefficient of Linear Expansion	ASTM D696	18.0 x 10 ⁻⁶ in/in/°F
Water Absorption	ASTM D570	<0.05%
Moisture Vapor Emission Rate	ASTM F1869	8-10 lbs
Relative Humidity	ASTM F2170	<80%

CHEMICAL AND STAIN RESISTANCE

1 = Best for chemical resistance: No adverse effects; Remove within 24 hours.

2 = Low potential for stain: No adverse effects: Removed within 24 hours.

3 = High potential for stain or degradation: Must be removed within 24 hours of exposure.

NR = Not recommended

Acetic Acid 10%	1	Citric Acid, 30%	1
Acetic Acid, 30%	2	Ethanol, 95%	NR
Acetone	NR	Ethyl Acetate, 99%	NR
Ammonia, 30%	1	Formaldehyde, 37%	3
Ammonium Hydroxide, 30%	1	Premium Gasoline	1
Antifreeze (Coolant)	1	Hydraulic Fluids	2
Benzene	3	Hydrochloric Acid, 10%	3
Benzyl Alcohol	3	Hydrochloric Acid, 30%	3
Betadine, 11%	NR	Hydrofluoric Acid, 10%	1
Boric Acid, 4%	1	Hydrofluoric Acid, 30%	3
Brake Fluid, DOT 3	1	Hydrogen Peroxide, 10%	NR
Chromic Acid, 10%	3	Hydrogen Peroxide, 50%	NR
Chromic Acid, 30%	3	Iodine, 2%	3



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Isopropyl Alcohol	3	Silver Nitrate, 20% (Photo Labs)	3
Jet Fuel	1	Hydraulic Fluid Skydrol LD-4	2
Lactic Acid, 30%	NR	Sodium Chloride, 20%	1
Lime Juice	2	Sodium Hydroxide 50%	1
Magnesium Hydroxide	1	Sodium Hypochlorite 10%	2
MEK (Methyl Ethyl Ketone)	NR	Sodium Hypochlorite 30%	3
Methanol	NR	Sodium Persulfate	3
Methylene Chloride	NR	Sulfuric Acid, 37%	NR
MIBK (Methyl Isobutyl Ketone)	NR	Tannic Acid, 20%	3
Mineral Oil	1	Tartaric Acid, 10%	1
Motor Oil, SAE 30	1	Transmission Fluid	1
Mineral Spirits	NR	Urine, Dog or Cat	1
Mustard, Yellow	2	Urea (Nitrogen-Rich Fertilizer)	1
Nitric Acid, 30%	NR	Vinegar, Distilled	1
Oleic Acid	1	Water (Hard Water from Well)	1
Oxalic Acid, 10%	1	Whisky	1
Phosphoric Acid, 20%	3	Wine, Cabernet Sauvignon	2
Potassium Hydroxide, 30%	1	Xylene	3
Propylene Glycol	1		

COLORANTS

- May reduce chemical resistance.
- May increase potential for stain.
- Coatings tested at ambient temperature over 1-3 days' exposure to chemical.

GENERAL COVERAGE RATES

APPLICATION	COVERAGE RATES
Primer Coat	250-300 SF/gal
Topcoat, 8-12 mils	140-200 SF/gal
Topcoat, 15-20 mils	80-100 SF/gal
Topcoat, 25-30 mils	50-60 SF/gal
Base Coat, 1/8"	50 SF/KIT
Base Coat, 3/16"	35 SF/KIT
Broadcast System Cap Coat Over 1/4" Color Chip	150 SF/gal
Broadcast System Cap Coat Over 30-Mesh Industrial Sand	90-100 SF/gal
Broadcast System Cap Coat Over F-grade or 40-S Color Quartz	90-100 SF/gal
Metallic Base Coat, 15-20 mils	80-100 SF/gal
Metallic Base Coat, 25-30 mils	50-60 SF/gal



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MIXING

Standard Kit Mix Ratio	Part A - 1 gal. or 10 gal. Part B - 1/2 gal or 5 gal. (All Part B's)
Viscosity Reducer	1 -2 qtrs. / 3 mixed gals.
Diamapro® Diamapro-Epoxy Colorant	16 oz / 3 mixed gals.
Mixing Drill	Low-RPM, High-torque drill Jiffy double-bladed mixer
Mixing Directions	Mix A until color and consistency are uniform. Add B and continue to mix for 2 min.
Mixing Directions with Colorant	Mix A with colorant until color and consistency is uniform. Add B and continue to mix for 2 min.
Mixing Directions with Viscosity Reducer	Mix A with B for 1 minute. Add additive and continue to mix for 1 minute or until color and consistency is uniform.

GENERAL SURFACE PREPARATION REQUIREMENTS

- The substrate must be sound.
- All necessary concrete repairs have been completed.
- Must be clean, dry, and free of any bond inhibiting contaminants.
- When applying directly over concrete, the substrate must be mechanically profiled.
- Adhere to International Concrete Repair Institute current standards.
- Different projects may require a different concrete surface profile.

CLEAN UP

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

MAINTENANCE AND CLEANING

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

Availability: Diamapro® Diamapro-Epoxy is only available through Diamapro Systems® Authorized Distributors. For a list of Authorized Distributors please contact Diamapro Systems®.



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