



Diamapro-Thane ESD

Item Number: DPDTESD – 100-01

Diamapro® Diamapro-Thane ESD is the polyurethane Topcoat for the **Diamapro® Diamapro-ESD Coating System**. It is a high-build resin providing tremendous advantage over other Topcoats. It can be applied at 5 to 60 mils thick without losing effectiveness.

ADVANTAGE

- Body Voltage Generation: <15 volts
- Conductive (over conductive primer):
 - >104 to <106
 - Dissipative: >106 to <109
- Meets USDA, FDA, and SCAQMD Standards
- Eligible for LEED Points: Made in California from Partially Recycled Materials
- Anti-bacterial
- High Chemical and Stain Resistance
- High Traffic and Hot Tire Resistance
- Impact and Scratch Resistance
- Low Maintenance
- Low Odor
- UV Resistant
- Waterproofing

SUGGESTED USES & APPLICATION AREAS

- 911 Call Centers
- Aircraft Hangars
- Clean Rooms, Labs, and Testing Facilities
- Electronics Assembly and Production
- Hazardous Industries (e.g., dust or explosion)
- Packaging Lines
- Pharmaceutical Facilities
- Plastics Manufacturing
- Processing Areas
- Sensitive Product Storage
- Data Server Rooms
- Shipping and Receiving
- Transport Aisles

SUGGESTED USES

- Diamapro® Diamapro-Thane ESD has been designed as a topcoat for the Diamapro® Diamapro-ESD Coating System.
 - Required for the system to achieve desired electrostatic properties.

PRECAUTIONS AND LIMITATIONS

- Do not apply any single coat greater than 7 mils thick (225 sf per gallon).
- Do NOT install directly over moisture-sensitive concrete.
- Do NOT install directly over broadcasted vinyl chip.
- Do NOT install directly over 30-grit or larger quartz.
- Do NOT install directly over 80-mesh or larger aluminum oxide.
- Do NOT apply wax or finish that is non-conductive.
 - This will render static control properties ineffective.
- Do NOT let material puddle on floor.
- Adding Colorant to mixture may reduce working time by 5 minutes.
- **Diamapro® ESD ADDITIVE** may deepen color.
- Complete samples and onsite mock-ups to ensure desired finish is achieved.
- Application temperatures
 - Material cures faster as temperature and humidity increase.
 - Material cures slower as temperature and humidity decrease.



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- If temperatures are outside of those recommended, contact your Diamapro® Technical Representative.
- 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.
 - Are the responsibility of the installer.
- 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.

Diamapro® COATING SYSTEMS AVAILABLE

- Diamapro® Diamapro-Flake System
- Diamapro® Diamapro-Quartz System
- Diamapro® Diamapro-Metallic System
- Diamapro® Diamapro-Flow System

FINISH AND COLOR

- Low Gloss
- Color: Visit ESD Color Selection, DiamaproSystems.com
- Complete samples and onsite mockups to ensure desired results are achieved.

COMPONENTS

Standard Kit (1.25 gal.)	Bulk Kit (25 gal.)
Part A: Diamapro® Diamapro-Thane HP Gloss, 1 qt.	Part A: Diamapro® Diamapro-Thane HP Gloss, 5 gals.
Part B: Diamapro Diamapro-Thane HP, 1 gal.	Part B: Diamapro® Diamapro-Thane HP, 20 gal.
Colorant: Poly Colorant, 16 oz	Colorant: Colorant, 320 oz.
Texture: Anti-Slip Bead 50, 8 oz,	Texture: Anti-Slip Bead 50, 160 oz,
Anti-Slip Bead 100, 8 oz.	Anti-Slip Bead 100, 160 oz.
ESD Additive, 1 gal.	ESD: ESD Additive, 20 gal.
Diamapro® Diamapro-Solvent VOC, 1 qt.	Diamapro® Diamapro-Solvent VOC, 5 gals.

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 at **DiamaproSystems.com**.
- Testing Before installation
 - Test and look for any unknown site conditions and/or defects.
 - To ensure desired results are achieved, a mockup should be installed 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
Recommended Application Temperature	60-90°F, <70% RH (Relative Humidity)

Average Application Time

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Ambient Temperature	60-90°F, <70% RH	50°F, 30% RH	50°F, 75% RH	70°F, 50% RH	90°F, 20% RH	90°F, 80% RH
Working Time	15-25min	NR	NR	15-25 min	NR	10-15 min
Recoat Window	6-24 hrs.	NR	NR	6-24hrs	NR	3-12 hrs
Return to Service (Foot Traffic)	24 hrs.	NR	NR	24 hrs.	NR	12 hrs
Full Cure (Vehicle Traffic)	5 days	NR	NR	5 days	NR	5 days

*NR=Not Recommended

SURFACE PREPARATION

- Diamapro® Diamapro-Thane ESD is designed to be the Topcoat for the Diamapro® Diamapro-ESD Coating System.
- Substrate Condition
 - The substrate must be sound.
 - All necessary concrete repairs have been completed.
 - Must be clean, dry, and free of any bond inhibiting contaminates.

MIXING

Standard Kit Mix Ratio	Diamapro® Diamapro-Thane ESD Part A: 1 qt. Diamapro® Diamapro-Thane ESD Part B: 1 gal ESD: 1 gal. Colorant: 16 oz. Texture: 16 oz. Diamapro® Diamapro-Solvent VOC : 1 qt.
Mixing Drill	Low-RPM, low-torque drill with Jiffy double-bladed mixer
Mixing Directions	Add Colorant to Part A and mix until color is uniform. Add Diamapro-ESD Additive and continue mixing until consistency is uniform. Add Part B and continue mixing for up to 1 minute. Add texture and continue to mix until color and consistency are uniform. Total mixing time: 2 minutes.

APPLICATION

Coverage Rates

Application	Coverage Rate
Topcoat 4-5 mils	300-400 SF/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.

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PROPERTIES WHEN FULLY CURED

PROPERTIES	TEST METHOD	TYPICAL VALUES
Conductive System Resistivity	ASTM D257	>10 ⁴ and <10 ⁶ ohms
Dissipative System Resistivity	ASTM D257	>10 ⁶ and <10 ⁹ ohms
Adhesion Strength	ASTM D4541	>400 psi, over epoxy
Coefficient of Friction – Dry	ASTM D2047	0.7
Coefficient of Friction – Wet	ASTM D2047	0.6
Flame Spread/ Critical Flux	ASTM E648	Class 1
Flame Spread/ Rate of Burning	ASTM D635	Self-extinguishing
Flexibility/ Mandrel Bend	ASTM D522	Passes 1/8-in.
Gloss, 60°	ASTM D523	80+
Hardness (König Hardness)	ASTM D4366	170
Impact Resistance	ASTM D2794	120in-lbs.
Indoor Air Quality	CA 01350	Compliant
Microbial Resistance	ASTM G21	Passes, 0 growth
Tensile Elongation at Break	ASTM D2370	8%
Tensile Strength	ASTM D2370	6,500 psi
UV Resistance	ASTM D4587	Mid to High (Level 2)
Water Absorption	ASTM D570	<0.05
Yellowing Resistance	ASTM G154	< 3.0 ΔE, gray (color tested for visible changes)

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	Lactic Acid, 30% (Dairy Facility)	1
Acetic Acid, 30%	2	Lime Juice	1
Acetone	1	Magnesium Hydroxide	1
Ammonia, 30%	1	MEK (Methyl Ethyl Ketone)	1
Ammonium Hydroxide, 30%	1	Methanol	1
Antifreeze (Coolant)	1	Methylene Chloride	NR
Benzene (Component of Crude Oil)	1	MIBK (Methyl Isobutyl Ketone)	1
Benzyl Alcohol	1	Mineral Oil	1
Betadine, 11%	1	Motor Oil, SAE 30	1
Boric Acid, 4%	1	Mineral Spirits	1
Brake Fluid, DOT 3	1	Mustard, Yellow	1
Chromic Acid, 10%	1	Nitric Acid, 30%	1
Chromic Acid, 30%	1	Oleic Acid	1
Citric Acid, 30%	1	Oxalic Acid, 10%	1
Ethanol, 95%	1	Phosphoric Acid, 20%	1
Ethyl Acetate, 99%	1	Potassium Hydroxide, 30%	1
Formaldehyde, 37%	2	Propylene Glycol	1
Premium Gasoline	1	Silver Nitrate, 20% (Photo Labs)	1
Hydraulic Fluids	2	Hydraulic Fluid (Aviation), Skydrol LD-4	1
Hydrochloric Acid, 10%	1	Sodium Chloride, 20%	1
Hydrochloric Acid, 30%	3	Sodium Hydroxide (Caustic Soda), 50%	1
Hydrofluoric Acid, 10%	1	Sodium Hypochlorite (Bleach), 10%	1
Hydrofluoric Acid, 30%	3	Sodium Hypochlorite (Bleach), 30%	2
Hydrogen Peroxide, 10%	1	Sodium Persulfate	3
Hydrogen Peroxide, 50%	1	Sulfuric Acid, 37% (Battery Acid)	1
Iodine, 2%	3	Tannic Acid, 20%	2
Isopropyl Alcohol	1	Tartaric Acid, 10%	1
Jet Fuel	1	Transmission Fluid	1



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Urine, Dog or Cat	1	Whisky	1
Urea (Nitrogen-Rich Fertilizer)	1	Wine, Cabernet Sauvignon	1
Vinegar, Distilled	1	Xylene	1
Water (Hard Water from Well)			

To ensure desired results are achieved, products should be tested on site before installation.

Colorants

- May affect working times.
- May reduce chemical resistance.
- May increase potential for stain.

Availability: Diamapro® Diamapro-Thane ESD is only available through Diamapro Systems® Authorized Distributors and Applicators. Packaged in 5-gallon units. For a list of Authorized please contact Diamapro Systems®.

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