

HDC-100™ ESD URETHANE

PRODUCT TECHNICAL DATA SHEET



SKU: 224-0000-1



HDC 100 ESD IS A THREE-COMPONENT, ALIPHATIC POLYURETHANE TOPCOAT. Fortified with conductive carbon nanotube technology, HDC 100 ESD delivers a durable, UV-stable wear surface with long-term electrostatic dissipative properties that will not diminish over time. Applied at 3-4 mils, it produces a matte-to-satin finish with a subtle orange peel texture. Designed for use as the finish coat in Resinwerks ESD flooring systems, HDC 100 ESD is ideal for environments requiring reliable electrostatic discharge protection.

USES:

- » Electronics manufacturing
- » Laboratories
- » Clean Rooms
- » Pharmaceutical Production
- » Data Centers

ADVANTAGES:

- » Long working time
- » Low VOC
- » High abrasion resistance
- » UV-stable
- » Pigmented or Clear

PACKAGING & SHELF-LIFE

HDC-100 ESD is available in the following kits:

- » 1.08-gallon kit (.85-gallons part A in a one-gallon pail + 0.23-gallons part B + 3.38 lb part C

Shelf-Life::

- » 12 months factory sealed and stored at room temperature.

SUGGESTED APPLICATION:

- » Apply at thickness of 3 mils (maximum 4-mils) as topcoat in conjunction with HDC-100 aggregate.
- » Important: Do NOT exceed 4 mils DFT. Excess film build will push system RTG above $1.0 \times 10^9 \Omega$ — ESD non-conformance. Verify with wet film gauge.

ANCILLARY PRODUCTS:

- » Use as a topcoat over LevelGuard ESD as part of EPX-ESD System.
- » For pigmented coatings, post-add Resinwerks Urethane Colorant at a rate of 1 pint per kit.

MATERIAL COVERAGE

WET FILM THICKNESS	DRY FILM THICKNESS	APPROXIMATE COVERAGE
3.2 mils wft	3 mils dft	509 ft ² / gallon (12.5m ² /L)

GENERAL PRODUCT INFORMATION

Colors:	Clear and Pigmented
Solids Volume:	95%
V.O.C.:	Clear: 48 g/l
Pot-life:	90 Minutes @ 72° F
Mix-Ratio:	Mix Full Kit or 1/2 Kits only
Cure Schedule:	72° F @ 50% R.H.
To touch:	6-8-Hours
To re-coat:	6-8 Hours Minimum 24-Hours Maximum
Foot Traffic:	6-8-Hours
Heavy Traffic:	24-Hours
Clean-up:	Acetone / MEK
Application Temp:	50°F(10°C) - 90°F(32.2°C)
Environment:	For interior use only

GENERAL PRODUCT PERFORMANCE

TEST TYPE	TEST METHOD	RESULT
Hardness	ASTM D2240 Shore D	92
Taber Abrasion	ASTM D4060	16 mg loss
Tensile Strength	ASTM C307	3,200 psi
Flammability	ASTM D635	Self extinguishing
Impact Resistance	ASTM D2794	180 lb
Flexibility 1/4" cylindrical mandrel	ASTM D522	Pass
Adhesion	ASTM D4541	500+ PSI concrete fracture
Coefficient of Friction	ASTM D2047	>0.6 / pass

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ESD ELECTRICAL PERFORMANCE - FULL SYSTEM

ESD PERFORMANCE	SYSTEM MEASURED RANGE	CLASSIFICATION	STANDARD
Resistance to Ground-able Point	$8.0 \times 10^6 - 6.0 \times 10^7 \Omega$	Static Dissipative	ANSI/ESD STM71 / ASTM F150
S20.20 Program Requirement	$< 1.0 \times 10^9 \Omega$	✓ Pass	ANSI/ESD S20.20-2021
Body Voltage Generation (walking)	$< 100 \text{ V peak}$	✓ Compliant	ANSI/ESD STM97.2
RTG Test Voltage Applied	100 VDC	Dissipative range	ASTM F150 / STM71

ESD APPLICABLE STANDARDS - FULL SYSTEM

Standard	Description	Status
ANSI/ESD S20.20-2021	ESD Control Program Standard. RTG $< 10^9 \Omega$; body voltage $< 100 \text{ V}$.	✓ Compliant
ANSI/ESD STM71	Floor resistive characterization — RTG and RPP test methodology.	✓ Applied
ASTM F150	Electrical resistance — resilient flooring. Dissipative: $10^6 - 10^9 \Omega$.	✓ Confirmed

SURFACE PREPARATION

HDC-100™ ESD is intended for use as topcoat for complete Electrostatic dissipating systems using LevelGuard ESD. It is not designed for direct to concrete applications or to be used with other manufacturer's products. When applying HDC-100 over LevelGuard ESD, ensure that the surface to be coated is clean, dry and free of any dust or contaminants.

MIXING INSTRUCTIONS:

- » Prior to mixing, all products should be properly acclimated to the local ambient room temperature of 50°F(10°C) - 90°F(32.2°C)
- » Thoroughly agitate both part A and Part B separately prior to mixing. Mix complete kit for two minutes using a slow speed jiffy mixer. While mixing pour complete contents of HDC 100 part C aggregate into mix, taking care to properly suspend all aggregates.
- » For pigmented coatings, post-add Resinwerks Urethane Colorant at a rate of 1 pint per kit.

APPLICATION INSTRUCTIONS

- » Apply HDC 100 at a rate of approximately 500 square feet per gallon by pan rolling with a 3/8" - 1/4"(10 mm) nap roller.
- » For proper appearance, dip the roller in the coating and lightly roll out excess in the application tray. Take care to spread the material evenly and immediately back-roll in a perpendicular fashion.
- » Frequently agitate material in both the pan and mixing vessel during application process to keep aggregates properly suspended.

LIMITATIONS

- » Not intended for use over anything but LevelGuard ESD epoxy coatings.

- » Do not apply product when ambient or room temperature is below 40°F (4.4°C) or over 90°F(32.2°C) or if the relative ambient humidity is above 85%.
- » This product is not recommended for immersion service.
- » DEW POINT: Do not apply when dew point is within 5°F of the ambient temperature.

MAINTENANCE

The long-term performance, appearance, and life expectancy of wear surface products are dependent on an adequate routine maintenance program designed specifically for the installed wear surface. Resinous floor coating systems are nonporous, causing dirt and contaminants to remain on the surface. Recommended maintenance programs consist of frequent and thorough cleaning utilizing a neutral PH cleaner. The frequency of washing will vary depending on floor usage type, traffic and age. Please contact your local Resinwerks technical representative for more information.

NOTES

Thoroughly read all Material Safety Data Sheets prior to use and maintain copies on job-site at all times.

Mock-ups and field test areas are strongly recommended in order to validate performance and appearance related characteristics (including but not limited to color, inherent surface variations, wear, anti dusting, abrasion resistance, chemical resistance, stain resistance, coefficient of friction, etc.) to ensure system performance as specified for the intended use, and to determine approval of the coating system.

Variability in job site conditions (including but not limited to surface preparation, sunlight, humidity, dew point, temperature, etc.) during application of Urethane products may lead to fish-eyes, blistering, pinholes, wrinkling, or out-gassing of air in the concrete and are not product defects.