Take Control of Static

KRETUS® ESD ADDITIVE gives KRETUS® STATIC CONTROL SYSTEMS (kretus.com/esd) the high-build advantage other systems lack. Combine it with **KRETUS® TOP SHELF® EPOXY**, **POLYASPARTIC 92 LOW ODOR**, or **POLYURETHANE HP GLOSS** for toppings that can be applied at 5 to 60 mils thick without losing efficacy.

ADVANTAGES

- Body Voltage Generation: <15 volts
- Conductive (over conductive primer): $>10^4$ to $<10^6$
- Dissipative: $>10^6$ to $<10^9$
- Easy to Install
- Adhesion to Concrete, Wood, Metal, Non-glazed Tiles
- Meets USDA, FDA, and SCAQMD Standards
- Eligible for LEED Points
- Anti-bacterial
- High Chemical Resistance
- High Traffic and Hot Tire Resistance
- Impact and Scratch Resistance
- Low Maintenance
- UV Resistant in Polyurethane or Polyaspartic
- 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

PRECAUTIONS AND LIMITATIONS

- Material was designed as a top coat in the KRETUS® STATIC CONTROL SYSTEM (kretus.com/static-control) and is required for the system to achieve desired electrostatic properties.
- If combining with Polyaspartic, Do NOT apply single coat greater than 16 mils thick.
- If combining with Polyurethane HP, do not apply any single coat greater than 7 mils thick (~220 sf per gallon). Do NOT install directly over moisture-sensitive concrete, broadcasted vinyl chip, 30-grit or larger quartz, or 80-mesh or larger aluminum oxide.
- Do NOT add a topcoat with non-conductive waxes or finishes—this will render static control properties ineffective.
- Do NOT let material puddle on floor—this will cause white spots to appear when coating cures.
- Adding Poly Colorant to mixture may reduce working time by 5 minutes.
- KRETUS® ESD ADDITIVE may deepen color. Complete samples and onsite mock-ups to ensure desired finish is achieved.
- Coverage rates are for estimating purposes only. Factors such as waste, unusual/abnormal substrate conditions, and other unforeseen jobsite conditions may affect actual product yields and are the responsibility of the installer.

FINISH AND COLOR

- Low Gloss.
- Color: See ESD Brochure at kretus.com/esd.

STANDARD SIZE

- ESD Additive, 1-gallon bucket

COMPONENTS OF ESD TOP COAT

Polyurethane HP ESD

- **Part A:** 1 quart Polyurethane HP Gloss
- **Part B:** 1 gallon Polyurethane HP
- **Colorant:** 16 ounces Poly Colorant
- **Texture:** 8 ounces Anti-Slip Bead 50, 8 ounces Anti-Slip Bead 100
- **ESD:** 1 gallon ESD Additive
- **SC:** 1 quart Solvent Cleaner

Polyaspartic 92 ESD / EZ

- **Part A:** 1 gallon Polyaspartic 92 Low Odor EZ
- **Part B:** 1 gallon Polyaspartic 92 Low Odor
- **Colorant:** 16 ounces Poly Colorant
- **Texture:** 8 ounces Anti-Slip Bead 50, 8 ounces Anti-Slip Bead 100
- **ESD:** 1 gallon ESD Additive

Top Shelf® Epoxy ESD / EZ

- **Part A:** 1 gallon Top Shelf® Epoxy A-Resin
- **Part B:** 1/2 gallon Top Shelf® Epoxy EZ
- **Colorant:** 16 ounces Top Shelf® Epoxy Colorant
- **Texture:** 8 ounces Anti-Slip Bead 50, 8 ounces Anti-Slip Bead 100
- **ESD:** 1 gallon ESD Additive

Top Shelf® Epoxy ESD / AP

- **Part A:** 1 gallon Top Shelf® Epoxy A-Resin
- **Part B:** 1/2 gallon Top Shelf® Epoxy AP
- **Colorant:** 16 ounces Top Shelf® Epoxy Colorant
- **Texture:** 8 ounces Anti-Slip Bead 50, 8 ounces Anti-Slip Bead 100
- **ESD:** 1 gallon ESD Additive

Polyaspartic 92 ESD / FAST

- **Part A:** 1 gallon Polyaspartic 92 Low Odor FAST
- **Part B:** 1 gallon Polyaspartic 92 Low Odor
- **Colorant:** 16 ounces Poly Colorant
- **Texture:** 8 ounces Anti-Slip Bead 50, 8 ounces Anti-Slip Bead 100
- **ESD:** 1 gallon ESD Additive

- 8 ounces Anti-Slip Bead 100

Top Shelf® Epoxy ESD / FAST

- **Part A:** 1 gallon Top Shelf® Epoxy A-Resin
- **Part B:** 1/2 gallon Top Shelf® Epoxy FAST
- **Colorant:** 16 ounces Top Shelf® Epoxy Colorant
- **Texture:** 8 ounces Anti-Slip Bead 50, 8 ounces Anti-Slip Bead 100
- **ESD:** 1 gallon ESD Additive

SAFETY

Review current Safety Data Sheet(s) at kretus.com/safety-data-sheets and all relevant documentation before installation. Safety conditions and personal protective equipment must be considered before using any KRETUS® product.

TESTING AND WARRANTY

Before you begin installation, review Pre- and Post-Job Checklists available at kretus.com/project-planning. 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 beginning installation.

STORAGE & 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

Polyurethane HP ESD

Application Temperature ..... 60-90°F, <70% RH
Working Time | Recoat Window ..... 20 min | 4-6 hrs
Walking Traffic | Vehicle Traffic ..... 12 hrs | 5-7 days

Polyaspartic 92 Low Odor ESD / EZ

Application Temperature ..... <80°F, <55% RH
Working Time | Recoat Window ..... 15-25 min | 6-24 hrs
Walking Traffic | Vehicle Traffic ..... 24 hrs | 5-7 days

Polyaspartic 92 Low Odor ESD / FAST

Application Temperature ..... <80°F, <35% RH
Working Time | Recoat Window ..... 15-20 min | 3-24 hrs
Walking Traffic | Vehicle Traffic ..... 24 hrs | 3-7 days

Top Shelf® Epoxy ESD / EZ

Application Temperature ..... 60-110°F, <90% RH
Working Time | Recoat Window ..... 45-50 min | 9-36 hrs
Walking Traffic | Vehicle Traffic ..... 24 hrs | 7 days

Top Shelf® Epoxy ESD / AP

Application Temperature ..... 60-95°F, <90% RH
Working Time | Recoat Window ..... 25-30 min | 7.5-36 hrs
Walking Traffic | Vehicle Traffic ..... 24 hrs | 7 days

Top Shelf® Epoxy ESD / FAST

Application Temperature ..... 41-85°F, <90% RH
Working Time | Recoat Window ..... 15-20 min | 5.5-24 hrs
Return to Service – Walking Traffic ..... 10 hrs
Full Cure – Vehicle Traffic ..... 5-7 days

All times were tested under controlled lab conditions at 70°F, 50% RH.

SURFACE PREPARATION

ESD ADDITIVE is designed to be combined with a KRETUS® coating and installed over another KRETUS® application. Before installing, the substrate must be sound, meaning all necessary concrete repairs have been completed, and it must be clean, dry, and free of any contaminates, moisture, materials, or particles that may hinder material's adhesion to concrete.

MIXING

Mix Ratio
Polyurethane HP ESD ..... 1 qt A:1 gal B:1 gal ESD:16 oz Colorant:16 oz Texture:1 qt Solvent Cleaner
Polyaspartic 92 Low Odor ESD ..... 1 gal A:1 gal B:1 gal ESD:16 oz Colorant:16 oz Texture
Top Shelf® Epoxy ESD ..... 1 gal A:1/2 gal B:1 gal ESD:16 oz Colorant:16 oz Texture
Mixing Drill ..... low-rpm, low-torque drill with Jiffler® double-bladed mixer

Mixing Notes

- Pre-mix Part A and Part B separately until color and texture is consistent. Use separate mixer to avoid cross-contamination. If using a separate mixing vessel, pour entire contents of Part A into mixing vessel first.
- Empty entire contents of Colorant into Part A and mix until color and texture is uniform. Mixture may sit for up to 24 hours before it is combined with Part B. Consistency of mixture should be uniform before combining with Part B.
- Empty entire contents of Part B into Part A and mix for 1 minute. Scrape sides of container/mixing vessel and mix for 1-2 minutes to ensure all material is thoroughly mixed. Total mixing time: 2-3 minutes.
- Continue mixing during application to ensure a uniform cure.

APPLICATION

Keep a wet edge while applying product. Wear spiked shoes when walking on material.

- Over UPC or epoxy cap coat: Apply ESD top coat with Flat Stiff Midwest Rake® 26" Easy Squeegee™ blade and non-shed 3/8"x12" nap roller.
- Over WB CONDUCTIVE PRIMER or TOP SHELF® EPOXY: Apply POLYURETHANE HP GLOSS ESD with 3-5 WFT-mil Midwest Rake® 26" Easy Squeegee™ blade and non-shed 3/8"x12" nap roller. For POLYASPARTIC 92 ESD and TOP SHELF® EPOXY ESD, use an 8-12 WFT-mil Midwest Rake® 26" Easy Squeegee™ blade and non-shed 3/8"x12" nap roller.

PROPERTIES OF FULLY CURED COATING

PROPERTIES	TOP SHELF® EPOXY ESD	POLYASPARTIC 92 ESD	POLYURETHANE HP ESD
Conductive System (Resistivity, ASTM D257)	$>10^4$ and $<10^6$ ohms	$>10^4$ and $<10^6$ ohms	$>10^4$ and $<10^6$ ohms
Conductive System Nominal Thickness with 16-mil Epoxy MVR System	35 mils	35 mils	30 mils
Dissipative System (Resistivity, ASTM D257)	$>10^6$ and $<10^9$ ohms	$>10^6$ and $<10^9$ ohms	$>10^6$ and $<10^9$ ohms
Dissipative System Nominal Thickness with 16-mil Epoxy MVR System	28 mils	28 mils	23 mils
Low-emitting Material (LEED v.4, SCQAMD)	yes	yes	yes
Body Voltage Generation (with Dissipative Footwear, ESD STM97.2)	15V	15V	15V
Abrasion Resistance (ASTM D4060)	good (24-30 mg)	better (10 mg)	best (4 mg)
Odor	very low	low to fair	low
Wear Resistance (ASTM D968)	good (20 L/mm)	better (50 L/mm)	best (100 L/mm)
Heat Resistance Limitation	140-220°F	140-220°F	140-220°F
Hardness (Shore D, ASTM D2240)	best (80-85)	good (75-80)	good (75-80)
UV Resistance	not recommended	better (level 3)	good (level 2)
Chemical Resistance*	good	good	best

*For specific chemicals, see the KRETUS® Chemical Resistance Guide at kretus.com/project-planning.