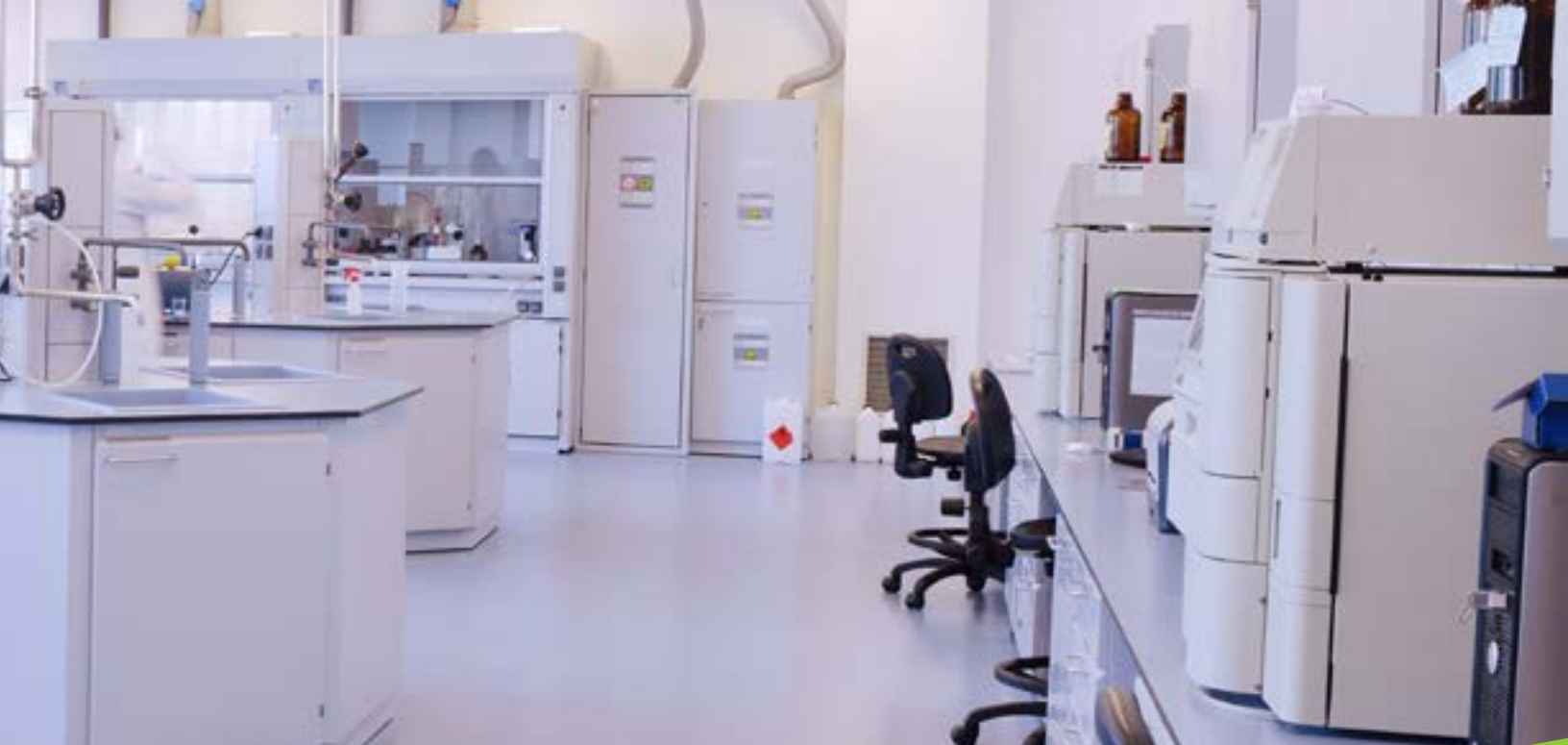


KRĒTUS

THOUGHTFULLY DESIGNED COATINGS

STATIC CONTROL
INSTALLATION GUIDE

SAFETY

Review current Safety Data Sheet(s) and all relevant KRETUS® documentation. Safety conditions and personal protective equipment must be considered before mixing or installing 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.

ON-SITE APPLICATION TESTING

To ensure desired results are achieved, the system should be tested in a small area on site before beginning installation.

MAINTENANCE AND CLEANING

For daily cleaning of fully cured system, use KRETUS® Coating Cleaner or similar pH-neutral cleaning product. For more information on the proper care of your floor, review the Maintenance and Cleaning Guide available at kretus.com/project-planning.

PRODUCT GUIDE

Most KRETUS® 2- and 3-component products have fast- and slow-cure hardeners. Before selecting product, consider jobsite temperature, MVER, applicator's skill level, and time available for installation. FC and FAST hardeners are recommended only for experienced installers or at low temperatures.

	WB EPOXY CONDUCTIVE PRIMER (2 COMPONENT)
APPLICATION TEMPERATURE	40-100°F <90% RH
WORKING TIME	30 min
RECOAT TIME	2-24 hrs
RETURN TO SERVICE	16 hrs
FULL CURE	7 days

	TOP SHELF® EPOXY (2 COMPONENT)		
	EZ	AP	FAST
APPLICATION TEMPERATURE	60-110°F <90% RH	60-95°F <90% RH	41-85°F <90% RH
WORKING TIME	40-50 min	25-35 min	15-20 min
RECOAT TIME	9-36 hrs	7.5-36 hrs	5.5-24 hrs
RETURN TO SERVICE	24 hrs	24 hrs	10 hrs
FULL CURE	7 days	7 days	5 days

	POLYASPARTIC 92 LOW ODOR (2 COMPONENT)	
	EZ	FAST
APPLICATION TEMPERATURE	<80°F <55% RH	<80°F <35% RH
WORKING TIME	15-25 min	15-20 min
RECOAT TIME	6-24 hrs	3-24 hrs
RETURN TO SERVICE	24 hrs	24 hrs
FULL CURE	5 days	3 days

	POLYURETHANE HP (2 COMPONENT)
APPLICATION TEMPERATURE	60-90°F <70% RH
WORKING TIME	20 min
RECOAT TIME	4-6 hrs
RETURN TO SERVICE	12 hrs
FULL CURE	5 days

All times recorded using 1-qt. sample at ambient temperature of 70°F and 50% humidity. Top Shelf® Epoxy recorded using A-Resin in 1-qt. sample.

STORAGE, HANDLING & DISPOSAL

- Storage: Store materials in a cool (60-80°F), dry place out of direct sunlight. DO NOT allow water into materials unless instructed to do so.
- Handling: Safety Data Sheets must be adhered to at all times. No personnel may touch, relocate, or use materials without proper training. All materials are to be treated as dangerous substances without firsthand knowledge. Congregating, eating, smoking, or drinking of any kind is not allowed on or near materials.
- Disposal: Follow federal, local, and building requirements for waste disposal.

LIMITATIONS

- ESD Additive with Top Shelf® Epoxy: In general, use A-Resin (Part A) with EZ hardener (Part B) for easy installation. If Fast or FC hardener is required for quick return-to-service, work in smaller areas or recruit more installers.
- Polyaspartic: Do not apply single coat greater than 14 mils thick (114 sf per gallon).
- ESD Additive with Polyurethane HP: Do not apply 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.
- Where outgassing is suspected or prevalent, a prime coat may be required.
- Complete samples and onsite mockups to ensure desired finish is achieved.
- Do not split kits.
- Do not let material puddle on floor—this will cause white spots to appear when coating cures.

- All epoxy ambers over time. If color stability is important, use Polyaspartic 92 Low Odor or Polyurethane HP ESD top coat.
- Adding Poly Colorant to any mixture may reduce working time by 5 minutes.
- Topping with non-conductive wax or finish will render static control properties ineffective.

SURFACE PREPARATION GUIDELINES

Contact KRETUS® Technical Representative if substrate is not listed below.

Concrete Substrate Must Be

- Clean: Remove all release agents, curing compounds, salts, efflorescence, grease, oil, dust, and other contaminates or particles that would hinder material's adhesion to substrate.
- Profiled: New concrete should be allowed to dry a minimum of 30 days. Mechanically prepare concrete to ICRI CSP 3. Adhere to ICRI (International Concrete Repair Institute) current standards.
- Sound: Clean and treat all moving and nonmoving joints and cracks.
- Grounded: A copper strip must be attached to the 110 V ground wire every 1,000 SF.

JOINT AND CRACK REPAIR

Coatings tend to pull away from termination points (anywhere concrete ends), joints, cracks, gutters, drains. Anchor joints may need to be added 6" from termination points. Joints and cracks may need to be expanded to 2x the width and 1x the depth.

When repairing joints, ensure that electrical continuity is maintained throughout the system by installing the ESD top coat over joints. Intermittent cracking formed in the topcoat may break some of the continuity over the joint. But if the crack runs the entire length of the joint completely separating adjacent slabs, the continuity will be interrupted.

To repair non-moving joints, fill with semi-rigid joint compound using a backer rod and coat with ESD top coat.

Consider grounding any moving (isolation and expansion) joints:

- In very low traffic areas: Use a conductive metallic grounding strap or conductive adhesive copper tape after the ESD top coat is applied. This type of grounding must be kept in a location where there is minimal to no traffic which could possibly break this bridged grounding strap.
- For those with lots of movement: Run a U-shaped grounding piece of conductive metallic strap or conductive adhesive copper tape through the entirety of the joint. Allow the tabs of the grounding piece to extend at least 1" from the joint onto adjacent slabs. Allow tabs to remain bare to receive only the ESD top coat.

MIXING GUIDELINES

Select a well-ventilated area outside of application zone and out of direct sunlight. Ideal mixing station is 4-by-4-feet or larger level surface protected by cardboard or plastic liner. For mixing station examples, review KRETUS® Mixing Station photo gallery available at kretus.com/project-planning.

Prepare Materials for Application

Organize and inspect products, equipment, and tools to minimize delays during installation. Group together the components and tools needed for each application:

- Anti-Slip
- ESD Additive
- Polyaspartic 92 Low Odor Parts A, B, and Poly Colorant
- Polyurethane HP Parts A, B, and Poly Colorant
- Top Shelf® Epoxy Parts A, B, and Colorant
- Urethane Polymer Concrete Parts A, B, C, and Colorant
- WB Conductive Primer Parts A and B

Examine the components for each application individually:

- Anti-Slip: Make sure material is dry and undamaged. Moisture will cause material to clump. Clumps should be sifted before combining with the other components.
- ESD Additive: Do not split kits. Check to see that batch numbers are the same. Make sure material is dry and undamaged. Moisture will cause material to clump.
- Part A's: Check to see that appearance is consistent throughout and that batch numbers are the same. If different batch numbers, box (or mix) batches to keep coating consistent throughout application.
- Part B's: Make sure there is no gelation or crystallization. If this occurs, contact your KRETUS® Technical Representative.
- Part C's: Make sure material is dry and undamaged. Moisture will cause material to clump. Clumps should be sifted before combining with the other components.
- Colorant: Check to see that color is correct and that batch numbers are the same. If different batch numbers, box (or mix) batches to keep coating consistent throughout application.

Pre-Mix Components

- Before combining any components, use a low-RPM, low-torque drill and a Jiffler double-bladed mixer to pre-mix each component *separately* until the texture, color, and consistency is uniform.
- Use a separate mixer for each product to avoid cross-contamination.
- DO NOT pre-mix dry materials.

Mixing Drill

- Urethane Polymer Concrete: high-RPM, high-torque drill and Jiffler double-bladed mixer
- For all other coatings: low-RPM, low-torque drill and Jiffler double-bladed mixer

Mixing Instructions

Mix carefully to avoid introducing bubbles into the mixture.

All mixing vessels must be clean. Pour entire contents of Part A into vessel first before adding other components. Change mixing buckets every 2-5 batches.

Ensure material is thoroughly mixed. Use a paint stick to scrape sides of and bottom of mixing vessel before pouring application. Buildup on bucket or transfer of buildup to a new batch affects the coating's overall appearance and may shorten a product's working time.

Only combine products within the same product line. DO NOT mix one product's Part A with a different product's Part B or C. For example, only mix Polyurethane HP Part B with Polyurethane HP Gloss or Satin Part A.

TOP SHELF® EPOXY MVR

- Pour entire contents of Part B into Part A and mix.
- Scrape sides of container/mixing vessel and mix to ensure all material is thoroughly mixed.
- TOTAL MIX TIME: 2 minutes.

URETHANE POLYMER CONCRETE

- Pour Part A and mix for 15 seconds.
- Slowly add Part C and mix for 1 minute or until texture is uniform.
- Add Part B and mix for 30 seconds.
- TOTAL MIX TIME: 2 minutes.

ESD TOP COAT

- Pour Poly Colorant into Part A and mix until color is uniform (if not adding color, skip this step).
- Add Anti-Slip and ESD Additive into mixture and continue mixing until texture is uniform.
- Add Part B and mix for 1 minute.
- Scrape sides of container/mixing vessel and continue to mix to ensure all material is thoroughly mixed.
- TOTAL MIX TIME: 2 minutes.

WB CONDUCTIVE PRIMER

IMPORTANT NOTE: Continue mixing during working time to ensure no particles settle and coating stays thoroughly mixed throughout application.

- Pour entire contents of Part B into Part A and mix. for 1 minute.
- Scrape sides of container/mixing vessel and mix to ensure all material is thoroughly mixed.
- TOTAL MIX TIME: 2 minutes.

Mixing Precautions

DO NOT mix more material than can be applied in the working time allotted.

DO NOT leave mixed material in mass. As soon as components are combined, the coating begins to cure and its temperature rises. If product is left in mass, the heat created may cause material to smoke or catch fire. Mixing large batches will create more heat and can shorten the product's working time.

DO NOT mix materials by hand.

DO NOT mix or install material in confined space without proper ventilation.

DEW POINT CALCULATION

Adhere to the KRETUS® Dew Point Calculation Chart available at kretus.com/project-planning.

- To avoid blistering and delamination, the substrate and material must be a minimum of 5°F above the dew point. This temperature must be maintained throughout drying time.
- EXAMPLE: If the air temperature is 60°F and relative humidity is 60%, the Dew Point is 45°F. The temperature of the substrate must be ≥ 50°F (45 + 5) before a coating can be applied.

APPLICATION GUIDELINES

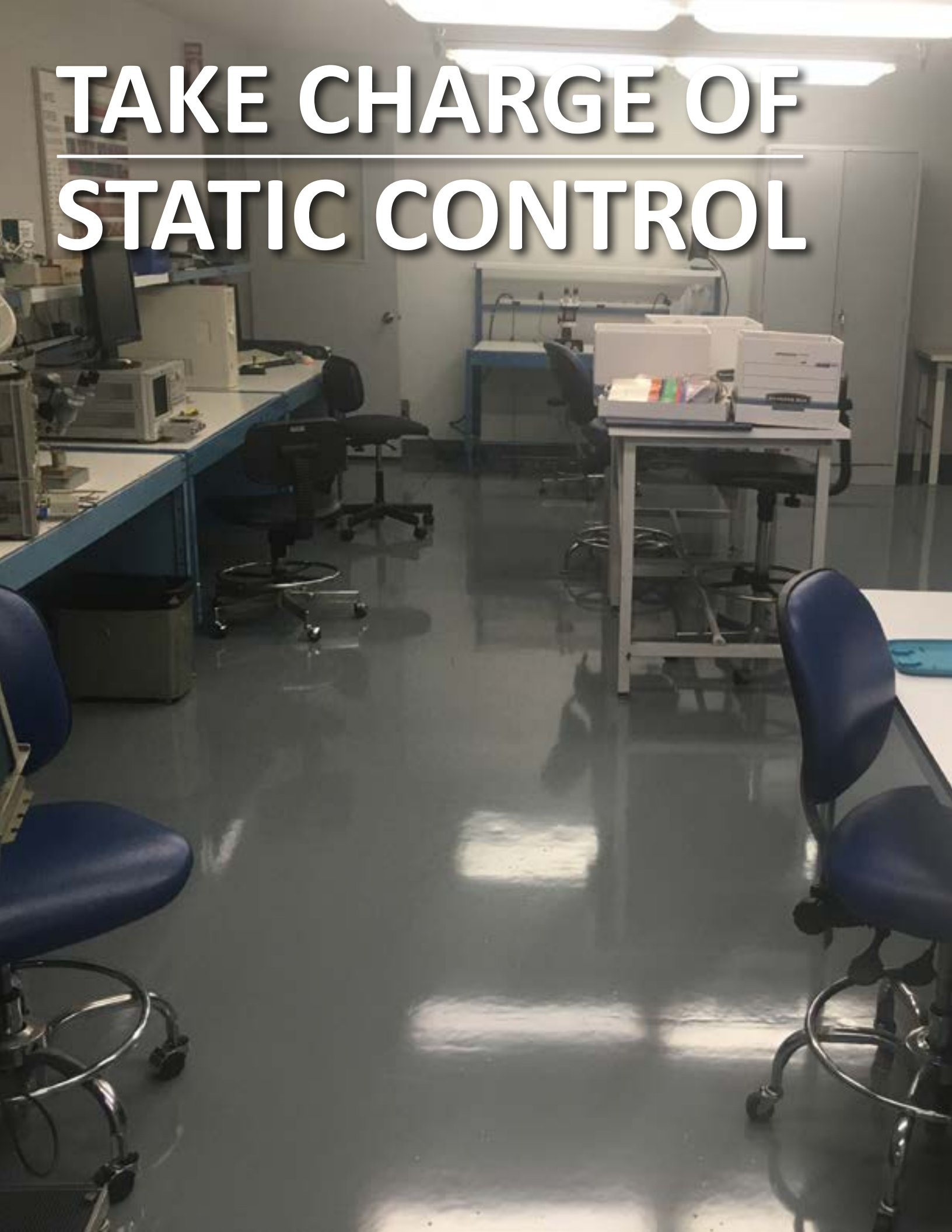
- DO NOT apply under direct sunlight. DO NOT install if inclement weather is forecasted during time allotted for installation.
- After mixing, pour material in even rows along substrate. Spread material evenly using the appropriate tools to achieve the mil thickness specified. Unless otherwise instructed, use a clean, non-shed 3/8" nap roller to back roll material so that application is uniform across the entire substrate.
- Keep a wet edge while applying products. Wear spiked shoes when walking on material.
- 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.

WB CONDUCTIVE PRIMER

- ↓ lower temperature and/or humidity = ↓ reduced working times
- ↑ higher temperature and/or humidity = ↑ increased working times

SOLVENT-BASED PRODUCTS (TOP SHELF® EPOXY, POLYURETHANE, URETHANE POLYMER CONCRETE)

- ↑ higher temperature and/or humidity = ↓ reduced working times
- ↓ lower temperature and/or humidity = ↑ increased working times


TAKE CHARGE OF
STATIC CONTROL

EQUIPMENT CHECKLIST

Safety

- ☐ KRETUS® Safety Data Sheets
- ☐ gloves
- ☐ hard hat
- ☐ knee pads
- ☐ respirator
- ☐ safety glasses
- ☐ _____
- ☐ _____
- ☐ _____

Mixing

- ☐ variable speed mixing drill
- ☐ mixing blades (Jiffler double-bladed mixer)
- ☐ paint mixing sticks
- ☐ measuring pails
- ☐ 1-, 2-, and 5-gallon pails (metal and/or plastic)
- ☐ masking/rosin paper
- ☐ cardboard, painter's plastic
- ☐ painter's tape
- ☐ duct tape
- ☐ cooler and ice
- ☐ _____
- ☐ _____

Clean-Up

- ☐ rags
- ☐ stiff-bristle broom(s)
- ☐ cordless electric leaf blower and extra batteries
- ☐ _____
- ☐ _____
- ☐ _____

Additional Tools/Products

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

This serves as a general guide and is not a comprehensive list.

Surface Preparation

- ☐ calcium chloride and pH test kit
- ☐ Wagner Rapid RH® test kit
- ☐ 10-gauge extension cords, 100'
- ☐ HEPA vacuum
- ☐ power source or generator
- ☐ Clarke 17" floor maintainer
- ☐ 17" sanding discs, 36 and 60 grit
- ☐ 17" sanding screens, 80 and 120 grit
- ☐ sanding/rubbing stones
- ☐ concrete grinding equipment
- ☐ diamond tooling to achieve CSP 3
- ☐ _____
- ☐ _____
- ☐ _____

Application

- ☐ chip brushes
- ☐ paint accessories—extension rods, frames, and pans
- ☐ 18" non-shed rollers—spike, loop, and 3/8" nap
- ☐ Midwest Rake® Easy Squeegee™ and blades—flat rigid, flat flexible, and WFT-mil (3-5, 5-7, 8-12, 15-20, and 25-30 thicknesses)
- ☐ trowel
- ☐ gauge rake
- ☐ spiked shoes
- ☐ _____

KRETUS® PRODUCT CHECKLIST

- ☐ See KRETUS® System Action Guidelines
- ☐ Anti-Slip Bead 100
- ☐ Anti-Slip Bead 50
- ☐ ESD Additive
- ☐ Poly Colorant
- ☐ Polyaspartic 92 Low Odor (2 component)
- ☐ Polyurethane HP Gloss (2 component)
- ☐ Top Shelf® Epoxy Colorant
- ☐ Top Shelf® Epoxy (2 component)
- ☐ WB Conductive Primer
- ☐ Solvent Cleaner
- ☐ Power Cleaner
- ☐ _____
- ☐ _____

SYSTEM ACTION GUIDELINE

ESD TS

This serves as a general installation guide. Before you begin, review all relevant documents.

NOTE: **PRIME COAT:** If outgassing is suspected or prevalent or if concrete is in poor condition or very porous, a prime coat may be required.
MVR COAT: If MVER is <25 lbs, MVR Coat must be ≥ 16 mils thick. If MVER is ≥25 lbs, select a system with higher moisture tolerance.
COVERAGE RATES: 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. Coverage rates are for estimating purposes only.

	1 MVR COAT	2 CONDUCTIVE PRIMER	3 ESD TOP COAT
PRODUCT	A (Top Shelf® Epoxy Part A, CR-Resin) + B (Top Shelf® Epoxy Part B, MVR-EZ or MVR-FC)	A (WB Conductive Primer Part A) + B (WB Epoxy Part B) + W (optional water)	See System Options on page 13.
STANDARD KIT MIX RATIO	A:B = 1 gal:1/2 gal	A:B:W = 1 gal:1 qt:1 qt	
MIXING INSTRUCTIONS	Mix A with B for 2 min.	Mix A for 1 minute or until color is uniform. Add B and mix for 1 minute. Continue mixing during working time to ensure no particles settle and coating stays thoroughly mixed throughout application.	
METHOD/TOOLS	Apply with 15-20 WFT-mil blade and non-shed 3/8" nap roller.	Apply with 5-7 WFT-mil blade and non-shed 3/8" nap roller.	
RECOAT TIME	Fast- and slow-cure hardeners available. See Product Guide.	See Product Guide.	
COVERAGE RATE	100 SF/GAL	233 SF/GAL	

SYSTEM ACTION GUIDELINE

ESD RC

This serves as a general installation guide. Before you begin, review all relevant documents.

NOTE: **PRIME COAT:** If outgassing is suspected or prevalent or if concrete is in poor condition or very porous, a prime coat may be required.
MVR COAT: If MVER is ≥15 lbs, select a system with higher moisture tolerance.
COVERAGE RATES: 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. Coverage rates are for estimating purposes only.

	1 MVR COAT	2 BROADCAST	3 SAND & SWEEP	4 CAP COAT	5 TOP COAT
PRODUCT	A (Urethane Polymer Concrete RC/TT Part A) + B (Urethane Polymer Concrete RC/TT Part B) + C (Urethane Polymer Concrete RC Part C)	KRETUS®-approved Industrial Sand/Quartz	**Small areas:** pole sander **Large areas:** floor maintainer	A (WB Conductive Primer Part A) + B (WB Epoxy Part B)	See System Options on page 13.
STANDARD KIT MIX RATIO	A:B:C = 6 lbs:6 lbs:6 lbs	N/A	N/A	A:B = 4 gal:1 gal	
MIXING INSTRUCTIONS	Mix A with B for 30 sec. Slowly add C and mix for 2 min.	N/A	N/A	Mix A for 1 minute or until color is uniform. Add B and mix for 1 minute. Continue mixing during working time to ensure no particles settle and coating stays thoroughly mixed throughout application.	
METHOD/TOOLS	**Work in 500 sf increments:** 1. Apply coating with 25-30 WFT-mil blade and non-shed 3/8" nap roller. 2. If using FC hardener, wait 5 min. For AP or EZ, wait 10-15 min. 3. Broadcast media to refusal.		When coat is dry, sand any uneven surfaces. Vacuum and remove any loose material.	Apply with flat rigid blade and non-shed 3/8" nap roller.	
RECOAT TIME	Fast- and slow-cure hardeners available. See Product Guide.		When loose material is removed and surface is clean.	See Product Guide.	
COVERAGE RATE	80-90 SF/KIT	**#30 or F-grade:** 1 LB/SF	N/A	90 SF/GAL	

SYSTEM ACTION GUIDELINE

ESD SL

This serves as a general installation guide. Before you begin, review all relevant documents.

NOTE: **PRIME COAT:** If outgassing is suspected or prevalent or if concrete is in poor condition or very porous, a prime coat may be required.
MVR COAT: If MVER is ≥ 25 lbs, select a system with higher moisture tolerance.
COVERAGE RATES: 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. Coverage rates are for estimating purposes only.

	1 MVR COAT	2 BROADCAST	3 SAND & SWEEP	4 CAP COAT	5 TOP COAT
PRODUCT	A (Urethane Polymer Concrete SL/MF Part A) + B (Urethane Polymer Concrete SL/MF Part B) + C (Urethane Polymer Concrete SL Part C)	KRETUS®-approved Industrial Sand/Quartz	**Small areas:** pole sander **Large areas:** floor maintainer	A (WB Conductive Primer Part A) + B (WB Epoxy Part B)	See System Options on page 13.
STANDARD KIT MIX RATIO	A:B:C = 8 lbs:8 lbs:25 lbs	N/A	N/A	A:B = 4 gal:1 gal	
MIXING INSTRUCTIONS	Mix A with B for 30 sec. Slowly add C and mix for 2 min.	N/A	N/A	Mix A for 1 minute or until color is uniform. Add B and mix for 1 minute. Continue mixing during working time to ensure no particles settle and coating stays thoroughly mixed throughout application.	
METHOD/TOOLS	**Work in 500 sf increments:** 1. Apply coating with 1/2" wide x 3/8" V-notched squeegee and/or gauge rake, and loop roller and/or spiked roller. 2. If using FC hardener, wait 5 min. For AP or EZ hardeners, wait 10-15 min. 3. Broadcast media to refusal.		When coat is dry, sand any uneven surfaces. Vacuum and remove any loose material.	Apply with flat rigid blade and non-shed 3/8" nap roller.	
RECOAT TIME	Fast- and slow-cure hardeners available. See Product Guide.		When loose material is removed and surface is clean.	See Product Guide.	
COVERAGE RATE	50-60 SF/KIT @ 1/8" high	**#30 or F-grade:** 1 LB/SF	N/A	90 SF/GAL	

SYSTEM ACTION GUIDELINE

SYSTEM OPTIONS TOP COAT

This serves as a general installation guide. Before you begin, review all relevant documents.

NOTE: **COVERAGE RATES:** 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. Coverage rates are for estimating purposes only.

	OPTION 1 TOP SHELF® EPOXY ESD	OPTION 2 POLYASPARTIC 92 ESD	OPTION 3 POLYURETHANE HP GLOSS ESD
PRODUCT	A (Top Shelf® Epoxy Part A, A-Resin) + C (Top Shelf® Epoxy Colorant) + E (ESD Additive) + T (50/50 blend of Anti-Slip Bead 50 and Bead 100) + B (Top Shelf® Epoxy Part B, EZ, AP, or FC)	A (Polyaspartic 92 Low Odor Part A) + C (Poly Colorant) + E (ESD Additive) + T (50/50 blend of Anti-Slip Bead 50 and Bead 100) + B (Polyaspartic 92 Low Odor Part B, EZ or FC)	A (Polyurethane HP Gloss Part A) + C (Poly Colorant) + E (ESD Additive) + T (50/50 blend of Anti-Slip Bead 50 and Bead 100) + B (Polyurethane HP Part B) + SC (Solvent Cleaner)
STANDARD KIT MIX RATIO	A:C:E:T:B = 1 gal:16 oz:1 gal:16 oz:1/2 gal	A:C:E:T:B = 1 gal:16 oz:1 gal:16 oz:1 gal	A:C:E:T:B:SC = 1 qt:16 oz:1 gal:16 oz:1 gal:1 qt
MIXING INSTRUCTIONS	Combine A, C, E, and T. Mix until color and texture are uniform. Add B and mix for 1-2 minutes. Continue mixing during working time to ensure no particles settle and coating stays thoroughly mixed throughout application.	Combine A, C, E, and T. Mix until color and texture are uniform. Add B and mix for 1-2 minutes. Continue mixing during working time to ensure no particles settle and coating stays thoroughly mixed throughout application.	Combine A, C, E, and T. Mix until color and texture are uniform. Add B and mix for 1-2 minutes. Continue mixing during working time to ensure no particles settle and coating stays thoroughly mixed throughout application.
METHOD/TOOLS	Apply with 5-7 WFT-mil blade and non-shed 3/8" nap roller. **OR** Apply with non-shed 3/8" nap roller using the dip and roll method	Apply with 5-7 WFT-mil blade and non-shed 3/8" nap roller. **OR** Apply with non-shed 3/8" nap roller using the dip and roll method	Apply with 5-7 WFT-mil blade and non-shed 3/8" nap roller. **OR** Apply with non-shed 3/8" nap roller using the dip and roll method
RECOAT TIME	Fast- and slow-cure hardeners available. See Product Guide.	See Product Guide.	See Product Guide.
COVERAGE RATE	233 SF/GAL	233 SF/GAL	233 SF/GAL

LIKE US ON SOCIAL MEDIA AND FOLLOW US ONLINE!

KRETUS® | kretus.com

1055 W. Struck Ave., Orange, CA 92867