CounterTek™

COUNTERTOP KITS

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V-SEAL®
Concrete Sealers & Concrete Coatings

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CounterTek™

COUNTERTOP KITS
APPLICATION OUTLINE & TIPS

APPLICATION OUTLINE

SURFACE PREPARATION

Substrate should be very clean, dry, neutral to slightly alkaline, and have a surface profile equivalent to a 200-300 grit sand/grind. Recommended application temperature is 70 degrees F (see cure schedule for details). On outdoor or moisture prevalent application areas, V-SEAL 101 is recommended as a moisture transmission reducing reactive penetrating sealer. Wait 24 hours after applications of V-SEAL 101 before moving onto O-S/W application.

STEP 1: W/O-S SUBSTRATE CONDITIONER - Dilute and apply per application instructions.

Wait approximately 30-45 minutes for W/O-S to dry before moving onto Epoxy Gen 3 application.

STEP 2: EPOXY GEN 3 PRIMER - Mix and apply Epoxy Gen 3 per application instructions.

Wait approximately 8-12 hours for Epoxy Gen 3 to be dry to the touch. If more than 24-48 hours passes between coats, the previous coating should be sanded lightly with 200-300 grit to provide mechanical bond, then cleaned with a lightly damp cloth before moving onto next coating.

STEP 3: 2K PRO 2 URETHANE TOPCOAT - Mix and apply 2K Pro 2 Urethane per application instructions.

Under normal application conditions, coatings will reach a full cure in 4-7 days. Usage during this time should be very delicate as the coatings are more vulnerable to damage before curing fully.

APPLICATION TIPS

Pay close attention to the following variables during application

SURFACE PREPARATION - see surface preparation above, inadequate surface preparation can lead to product failure or delamination

MIX RATIOS

W/O-S: Follow dilution guidelines in product instructions

Epoxy Gen 3: 1 Part A to .35 Part B (or 20 Parts A to 7 Parts B)

2K Pro 2 Urethane: 2.5 Parts A to 1 Part B (before induction) + 20-23% water after induction time (percentage of A+B combined)

APPLICATION & CURING CONDITIONS - 65°-85° F (recommended 70) with humidity less than 60%

COATING THICKNESS - Coatings should be applied within the correct wet thickness range. A wet thickness gauge, or 'mil gauge' should be used if necessary. One 'mil' equals one thousandth (1/1000th) of an inch thickness. The coverage rate of the product can be used to help estimate the amount of product necessary for your application area at the correct wet thickness.

Epoxy Gen 3: recommended 4-7 mils wet film thickness

2K Pro 2 Urethane: recommended 4-5 mils wet film thickness

ROLLING TIPS - If rolling, roll in a "V" or "W" pattern working quickly to apply the product thin and evenly. Product should have a slightly white haze when first applied. Overworking the product, using the product past the pot life, or uneven application can result in roller marks.

CONTAMINATION - To avoid contamination, clean new containers should be used if mixing the products in smaller than packaged volumes.

SHELF LIFE, USEABLE LIFE, POT LIFE - Shelf Life of all kit products is one year unopened. Once opened, products should be used within one month on no more than 3 separate applications. Once mixed, products must be used in their entirety before the pot life is up. Increased temperatures will reduce shelf life, useable life, and pot life once mixed.

POST APPLICATIONS AND PRECAUTIONS - While the CounterTek Countertop System is extremely resistant to stains and abrasion relative to other products on the market, it can still be damaged if not cared for properly. **Avoid use of painters tape and other masking tapes as they can bond to the coatings permanently and cause them to separate when the tape is removed**.

Manufacturer precautions include: avoiding cutting directly on the surface, cleaning up spills quickly, avoiding trapped moisture under wet objects that can leech into coating eventually, using hot pads and coasters when necessary, avoiding dragging sharp or heavy objects across a coated surface

REPAIR - All coating systems will need repaired or re-applied over time with usage. Catalyzed, two-part coatings like epoxy and urethane cannot typically be stripped or repaired with chemicals. Damaged areas should be sanded and re-applied. Aggressive grits may be used initially to remove sealer. Finishing with 200-300 grit and cleaning the surface is recommended before re-application of another coating.

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CounterTek™ W/O-S

WATER-BORNE ORGANO-SILANE SUBSTRATE CONDITIONER/ADDITIVE

With the introduction of W/O-STM Substrate Conditioner/Additive, ATG Labs is again at the forefront of water-borne solutions for the engineered cement, concrete and natural stone industries. Until now, all organo-silanes were solvent-borne... flammable, expensive to ship, and with very short pot life after mixing. For the first time, ATG Labs scientists have developed and perfected a totally water-borne organo-silane chemistry that is:

-non-flammable
-high-performance
-fast-drying
-with a very long pot life
-easy to use

THE NEW CHEMISTRY OF W/O-S

A true substrate conditioner, which can be used over the substrate or in a coating, is ambidextrous, namely with two active ends of the chemical structure. One end is an inorganic binder that typically locks to any compounds such as silica, sand, alumina, calcium, magnesium etc; and the other end must lock to organics such as residual coatings, resins in the fast-set cements, and (ultimately) the organic resins of the final topical coatings.

Until now, all such ambidextrous substrate conditioners required alcohol to "pop" the inorganic side. Since the active ends of these products are slowly neutralized by water, their pot life is short.

W/O-S has active end-terminals (already popped) that are sheltered by proprietary surfactant packages, allowing them to remain active for long periods of time in water.

SAFETY AND SAVINGS

Since alcohol is not used in ATG's new W/O-S chemistry, the expense of hazardous shipping is eliminated; and the water-borne, non-flammable product can be used safely on all job sites.

WHY A SUBSTRATE CONDITIONER/ADDITIVE?

The basic function of a substrate conditioner/additive is to increase the chemical bond between sealer and substrate. (Every airplane is treated with a solvent organo-silane before it is painted).

Any cementitious or natural stone substrate with an "unknown history" carries the risk of old silicones, oils and over-polished surfaces that can reject sealers and coatings. W/O-S, with the capacity to "chemically lock" such conditions and create a condition of high receptivity to sealers/coatings, is "low-cost insurance".

Additionally, all cementitious substrates, including engineered cements, experience a cure cycle that progresses with time. Un-hydrated materials and the complex variables of temperature and vapor pressures often create the possibility of later hazing under sealers. W/O-S is delivered to concretes/cements as a waterborne "second hydrating" element that can "coat and lock" the topical layer in a mode that becomes better cured and highly acceptable to sealers/coatings.

COVERAGES AND PACKAGING

W/O-S Substrate Conditioner is sold as a concentrate, packaged according to surface area that will be treated when diluted with water. Five SKU's are available: 60-75 sq.ft.; 250-300 sq.ft.; 500-600 sq.ft.; 1,100-1,400 sq.ft.; and 2,200-2,800 sq.ft. (lower numbers are coverages for more absorbent substrates). As an Additive, W/O-S is sold premeasured for addition to unit sizes of A.T.G. primers and coatings.

APPLICATION

W/O-S Concentrate is added to (measured) water at the job-site and is ready immediately either for addition to an ATG coating or for application to a clean and dry substrate with ambient and surface temperature >60o and >85o. As a Substrate Conditioner, application is with short shag roller or sprayer to wet the substrate. Colorless and odorless, W/O-S dries in 30 minutes – 1 hour, ready for ATG coatings.

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CounterTek™ Epoxy Gen 3

WATER-BORNE EPOXY RESIN FOR CONCRETE, ENGINEERED CEMENT, GYPSUM & WOOD INSTALLATIONS

Cutting-Edge Epoxy Technology

CounterTek™ Epoxy Gen 3 is the only 3rd Generation Waterborne Epoxy on the the market. This new technology in resins and catalyst chemistry provides dramatic improvement over even the most recent epoxy resin modifications used by other manufacturer.

The Epoxy Gen 3 system is a high-performance project time-saver. As a waterborne system, the substrate need not be totally dry. The relatively short print-free and cure times make access or second/top coatings fast and efficient. The 51% solids and build rate are ideal for high-wear installations on acid-etched, shot-blast and/or profiled substrates.

EXCEPTIONAL PERFORMANCE AS A CLEAR COAT

CounterTek™ Epoxy Gen 3 is characterized by superb adhesion to a wide range of substrates, high solids onlay + DFT, outstanding abrasion-resistance; and rapid hardness/cure. With excellent UV resistance as compared to other epoxies, this coating holds its clarity for extended time and exposure conditions. The 3rd Generation Technology provides a surface that is far more resistant to staining and grease spots than conventional epoxies.

COLOR WITHOUT COMPROMISE

Adding pigmentation to standard epoxies creates spaces in the resin matrix that can interfere with adhesion and strength. In the CounterTek™ Epoxy Gen 3 system, color is delivered by use of CounterTek™ Microsperse Dyes. Because of the chemistry of these dyes, there is no performance compromise.

Tensile Strength	typically 7,000 psi
Elongation	typically 90% at cure
Tabor Abrasion Test	typically 40 mg loss
(CS-17 Disk, 1000 grams, 1000 cycles)	
Solids Content	51%
V.O.C. Content	91 g/L catalyzed
Dry Rate	walkable: 6 hrs typical light service: 12 hrs typical standard service: 24 - 48 hrs full cure & protection: 3 days
Coverage	~250 - 400 sq. ft. / Gal / Coat [~ 4 - 7 mils WFT / Coat]
DFT	~ 3.5 mils [~8 mils if 2 coats]

Chemical & Solvent Resistance

(30 Minute Spot Tests)

Xylene	no effect
Toluene	slt. softening, recovers
MEK	no effect
Butoxy ethanol; 409	no effect
Isopropyl alcohol	no effect
1 N. NaOH	no effect
30% Ammonia	no effect
Clorox Bleach	no effect
1 N. HCL	temp. whitening, recovers
glacial acetic acid	no effect
engine oil	no effect
brake fluid	no effect

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COUNTERTEK EPOXY GEN 3
INSTRUCTIONS FOR USE

PREPARATION

Before applying CounterTek Epoxy Gen 3, surface should be totally clean and absorbent, free of all contamination and residues and without laitance/scrim coat. For concrete, surface should be no smoother than a 200-300 grit grind or sand. If concrete/cement has been acid stained or etched, a scrub with a non-sudsing ammonia solution, a copious double water-rinse and ample dry time are required for neutralization. For some cement and concrete surfaces, O-S/W™ Substrate Conditioner is applied prior to Epoxy Gen 3 to promote adhesion. For engineered cement, curing should be complete before application of CounterTek coatings. Product, substrate and site temperature, when mixing, during application and during cure, must be 65º- 85º F., humidity <60%, with good air circulation (box fans are required) for normal cure.

COVERAGE

Gallon Unit: ~225 - 400 sq. ft.
Quart Unit: ~50 - 90 sq. ft.
Pint Unit: ~30 - 45 sq. ft.

One unit of CounterTek Epoxy Gen 3 consists of two bottles:

- Part A - Resin
- Part B - Catalyst

MIX RATIO*

20 Parts A to 7 Parts B (or 1 Part A to .35 Parts B)
*Units are premeasured to contain the correct ratio of Part A and B if mixed in entirety.

APPLICATION

1. Pour Part B into Part A, then close Part A with original cap tightly.
(if mixing less than full units, premeasure Part A and B before adding to clean/new mixing container with cap)
2. Mix well by shaking for 1-2 minutes.
3. Wait 10 Minutes (Induction Time). Pot life is now ~45 minutes (at 70 degrees F).
4. Apply with Airless or HVLP Sprayer, or short nap roller in an even continuous coat without pooling
    - at 225 - 300 sq.ft./Gallon (5-7 mils wet film thickness) for porous and acid stained substrates
    - at 325 - 400 sq.ft./Gallon (4-5 mils wet film thickness) for tighter surfaces and/or over primers

    *If applying with a roller, use a V or W pattern to quickly spread and backroll the material lightly and evenly, quickly moving into the next area so overlaps are wet to wet.
5. For added durability, for very porous substrates, or applications near water features, a second coat of Epoxy Gen 3 can be applied when first coat is print free and totally clear (no haze left). Under normal applications conditions this is after 8 hours. Thicker applications, cooler temperatures, and/or high humidity can increase cure times.
6. When final Epoxy Gen 3 coat is print free and clear (no haze left), typically after 8 hours, topcoat with CounterTek 2K Pro 2 for best resistances to abrasion and heat.
7. Adhere to post-application precautions as coatings will be more vulnerable until fully cured several days after application.

CLEAN UP

Clean tools with soap and water before allowing product to catalzye. Diluted acetone can be used in spray guns. Close and properly dispose of bottles as job site chemical waste.

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CounterTek™ 2K Pro 2

HIGH PERFORMANCE WATER-BORNE POLYURETHANE COATING

CounterTek™ 2K Pro 2 is a water-borne 2-component high performance polyurethane coating for the most rigorous commercial, industrial, and architectural installations. CounterTek™ 2K Pro 2 is specifically formulated for Countertop Applications.

PROPERTY	RESULTS	ASTM METHOD
% Solids	64 typical	D 3960
Weight Per Gallon (lbs)	8.87	D 1475
VOC	48 g/L	D 3960
Pot Life	2-4 hours	N/A
Re-Coat Time	6-24 hours	N/A
Set to Touch	2 hours	D 1650
Print Free Time	12 hours	D 1650
Pencil Hardness	5H	D 3363
Direct Impact Resistance	>160 in/lbs	G 14-88
Indirect Impact Resistance	>160 in/lbs	G 14-88
Abrasion Resistance	20 mgs loss	D 4060
(CS-17 Disk, 1000 grams, 1000 cycles)		
Chemical Resistance (24 hour covered spot test)		
10% Hydrochloric Acid	No Effect	D 1308-87
25% Nitric Acid	Film Destroyed	D 1308-87
10 minute spot test	No Effect	
20 minute spot test	8/Few Blisters	
30 minute spot	8/Medium Blisters	
10% Sulfuric Acid	No Effect	D 1308-87
10% Ammonia	8 F Blisters	
10 minute spot test	No Effect	
20 minute spot test	No Effect	
30 minute spot	slt. softening/recovers	
Saturated Sugar Solution	No Effect	D 1308-87
Saturated Salt Solution	No Effect	D 1308-87
Methanol	No Effect	D 1308-87
Butanol	slt. softening/recovers	D 1308-87
Mineral Spirits	No Effect	D 1308-87
Gasoline	No Effect	D 1308-87
Xylene	No Effect	D 1308-87
Motor Oil	No Effect	D 1308-87
Clorox	No Effect	D 1308-87

CounterTek™ 2K Pro 2 features extraordinary abrasion resistance, 2x that for typical urethanes and 4x greater than typical epoxies. Performance characteristics, including high UV, heat, and chemical resistances make 2K Pro 2 the ideal finish coat(s) for an incredibly wide range of installations including offices, retail stores, hospitals, hotels, schools, senior living residences, and more.

A system of CounterTek™ 2K Pro 2 over CounterTek™ Epoxy Gen 3 or CounterTek™ 6 NanoCoat provides highest durability plus extraordinary protection. Virtually any design objective can be achieved with CounterTek™ Microsperse Dyes and CounterTek™ coatings.

CounterTek™ 2K Pro 2 requires precise, skilled application, but results in the most durable finish coat for protecting engineered cements, concrete, tile, dimensional stone, and other architectural building materials.

Available in three finishes:

- Gloss
- Low Gloss
- Extra Low Gloss

*with or without premixed Anti-Skid

Coverage:

~ 400 sq. ft./ Gal / Coat

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COUNTERTEK 2K PRO 2
INSTRUCTIONS FOR USE

PREPARATION

Product, substrate and site temperature, when mixing, during application and during cure, must be 65º- 85º F., humidity <60%, with good air circulation (box fans are required) for normal cure. CounterTek 2K Pro 2 should not be applied directly to concrete or masonry, but after a primer such as CounterTek Epoxy Gen 3, or for less color enhancement after CounterTek 6 NanoCoat.

COVERAGE @ 4-5 mils wet film thickness

Gallon Unit: ~400 sq. ft.
48 oz Unit: ~150 sq. ft.
12 Unit: ~40 sq. ft.

One unit of CounterTek 2K Pro 2 consists of two bottles:

- Part A - Resin
- Part B - Catalyst

MIX RATIO*

2.5 Parts A to 1 Part B

*Units are premeasured to contain the correct ratio of Part A and B if mixed in entirety.

APPLICATION

1. Shake Part A to ensure matting agents are dispersed equally.
2. Pour Part A then Part B into clean mixing container.
(if mixing less than full units, premeasure Part A and B separately before mixing)
3. Blade-stir with a drill for 5 minutes at a low speed to minimize air entrainment and internal heat. Work pail walls and bottom well to ensure all material is mixed.
4. Wait 15 Minutes (induction time) to start reaction.
5. After waiting induction time, dilute with 20% water.
6. Blade-stir again for 1-2 minutes at low speed. Pot life is now approximately 45 minutes (at 70 degrees F).
7. Apply with Airless or HVLP Sprayer, or short nap roller in a thin, even continuous coat without pooling
    - at 400 sq.ft./Gallon (4-5 mils wet film thickness) for tighter surfaces and/or over primers
    - at 350 sq.ft./Gallon for more porous substrates

    *If applying with a roller, use a V or W pattern to quickly spread and backroll the material lightly and evenly, quickly moving into the next area so overlaps are wet to wet. Cutting in edges must be done simultaneously with adjacent application.
8. Cure Conditions - Water must evaporate from the film to cure completely. Good air circulation is necessary for proper cure. If natural air circulation is not present in the application area, box fans should be used to provide air flow, but should not be pointed directly at the surface.
9. Adhere to post-application precautions as coatings will be more vulnerable until fully cured several days after application.

CLEAN UP

Clean tools with soap and water before allowing product to catalzye. Diluted acetone can be used in spray guns. Close and properly dispose of bottles as job site chemical waste.

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COUNTERTOP KITS
MAINTENANCE PROCEDURES

The following procedures apply AFTER finishes are FULLY CURED.
Frequency of procedures depends on use conditions, actual substrate (hardness, profile, porosity, etc.) **and coatings** (which products, number of coats, application methods, mil thicknesses, etc.)

1. **WIPE UP SPILLS** as they occur. Use damp cloth or cleaning solution of 2.
2. **CLEAN REGULARLY with a 1:64 solution of FloorTek Cleaner 60 using a dampened cloth.** Increase to 1:50 for very oily surfaces.
3. **NEVER use a sealed countertop as a cutting board.**
4. **USE coasters or felt pads below anything with sharp edges** (e.g. wine bottles, metal stands, etc.)
5. **Do not place pots or pans directly from stove or oven onto the surface.** Use cooling racks or heat-absorbent pads.
6. **If gouging or other damage occurs**, contact your contractor or manufacturer to spot retouch with original sealer formulation over clear surface to prevent dirt and contamination from passing through to the substrate.

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