

ULTRA-GLAZE 450

A THREE-COMPONENT, ALIPHATIC, CHEMICAL & ABRASION RESISTANT URETHANE TOPCOAT DESIGNED FOR USE IN HIGH TRAFFIC AREAS

ULTRA-SEAL 450 is a low sheen finish, aliphatic, three-component clear (or four-component pigmented) chemical resistant 90% CRU for use in high traffic environments needing a highly durable, chemical & abrasion resistant U.V. stable topcoat.

TYPICAL USES

- Avionics and hangar floors
- Food and beverage floors
- Forklift traffic areas
- Heavy industrial manufacturing floors
- Pharmaceutical floors
- Vehicle assembly and service floors
- Healthcare and veterinary

ADVANTAGES

- Developed for heavy traffic and abusive environments
- Greatly improves the service life of the coating system
- Resists development of traffic patterns and finish dulling
- Excellent rolling load resistance to forklift traffic
- Improves light reflectivity
- Easy to clean
- Chemical resistant
- Does not harbor bacteria
- Meets FDA standards
- Overnight return to service

PACKAGING

- 1.15 gallon kit
- 4 gallon kit

COLOR PACKS

- 1.15 gallon kit = 1 unit per kit
- 4 gallon kit = 4 units per kit

TEMPERATURE & HUMIDITY

Substrate temperature and materials must be maintained between 50°F (10°C) to 90°F (32°C) with less than 80% ambient humidity for 24 hours prior to & 24 hours after installation. Do not install

coatings when the dew point is within 5° of the temperature.

SURFACE PREPARATION

The concrete substrate must be clean, sound and dry. New concrete should cure for at least 30 days. Ultra-Glaze 450 will not fill voids or bridge large cracks. All voids and cracks must be patched using Umaco Universal 1023 then allowed to cure. The minimum pull off strength of the substrate is 200 psi.

Remove all dirt, dust, spalling or loose concrete, laitance, oil, grease, wax, mildew, efflorescence, laitance, curing compounds, form release agents, paint or any other foreign material which might effect the bond. Umaco Ultra-Clean may be used to remove oil or grease stains from concrete surfaces. The concrete must have a surface profile of CSP 2-3. Suitable preparation methods include dustless grinding, shot-blasting, scarification and etching using Umaco Ultra-Etch.

Priming

Umaco Ultra-Prime 100 should be applied over porous concrete prior to application in order to avoid outgassing and the development of surface defects.

Concrete Moisture

Perform testing to verify that the vapor pressure is below 3.0 pounds per 1000 square feet per 24 hours. If the vapor pressure exceeds this limit, Umaco Ultra-Prime MVB must be used (in place of Umaco Ultra Prime-100) prior to application.

MIXING

Add the entire contents of Part B into the Part A container (as well as any optional Ultra-Guard 450 Colorant Packs) mixing with a slow speed drill (≤ 450 RPM) with a paint mixing paddle for 1 minute. While continuing to mix, slowly add in the Part C powder then continue to mix for an additional 2 to 3 minutes to ensure no

powder clumps occur. **DO NOT ATTEMPT TO PART MIX KITS.**

Avoid whipping air into the mixture as bubbles will occur in the finished coating and under mixing may leave lumps in the finish or lessen the coating properties.

Optional Non-Slip Additive

Where additional slip resistance is required, blend 3.5 ounces of Umaco Ultra-Grip per each gallon.

APPLICATION

Once mixed, immediately pour material into a tall paint tray. **Do not pour onto the floor and spread.** Dip a 3/8" nap roller into the mixture to coat the roller head then roll off any excess into the paint tray avoiding liquid build-up on the sides of the roller caps and/or the frame. Avoid dripping during placement on the floor as the metallic fillers will concentrate in the drip and may not evenly disperse while finishing the coating. Roll out two parallel pathways roughly 8 to 10 feet in length. Then rewet the roller and repeat. Next, cross roll in a V-shaped pattern starting at one of the lines on the end working across the area while overlaying one side of the roller to connect and evenly place ensuring a uniform film thickness. Finish by extending the roller out to the furthest point of this area and pull back across the surface with light pressure in a straight line to remove roller marks and overlap each pass by 1/2" continuing across the entire section. Occasionally use the roller cover to remix the filler into the liquid in the paint tray. Ideally every 20 minutes. On larger projects, it is recommended to have a separate person perform for each stage of the product placement, V-roll and finishing process to ensure productivity and a uniform appearance to avoid roller lines. If the appearance is less than unsatisfactory, repeat the finish roll



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process again until a satisfactory appearance is achieved. Continue until the entire area desired is top-coated and allow to cure.

COVERAGE

Apply approximately 3 mils or less (534 to 650 sq.ft. per mixed gallon) to achieve the most monolithic appearance. When exceeding 4 mils WFT, foaming and/or a blotchy appearance should be expected.

DISPOSAL

Contact your local environmental regulatory agency for guidance on disposal of unused material. Do not pour down a drain or storm sewer.

STORAGE

Indoors between 65°F (18°C) to 90°F (32°C)

SHELF LIFE

18 Months in original, unopened containers kit

LIMITATIONS

- For industrial floors with wheeled traffic/fork lift traffic conditions, minimum CSP 3 profile is required for mechanical preparation as well as underlying resinous system
- Priming required over porous surfaces as the liquid may absorb too much leaving the powder filler loose on the surface
- Does NOT block U.V. light when applied clear over a non-U.V. stable product (i.e. epoxy or aromatic coatings)
- Do NOT install coatings when the Dew point is within 5° of the temperature.
- Application is NOT recommended above 80% humidity at time of install
- NOT water clear – may discolor underlying layer when applied clear
- Must be dip & rolled
- Foaming possible when over applied (too thick).
- NEVER EXCEED 4 mils WFT
- Must be applied with an 18 inch width roller cover
- Do NOT Use 9 inch wide or narrower rollers to apply

MAINTENANCE

The coating system must be allowed to cure for no less than one week before using any mechanical cleaning equipment on the surface & no less than 48 hours before neutral cleaner or water exposure. This includes auto-scrubbers, swing buffers, sweepers, etc.. Only dust & wet mopping may occur the first week. For maximum life expectancy, routinely sweep and wash floors with appropriate cleaners and detergents such Umaco Ultra-Clean. All chemicals or abrasive grit should be removed as soon as possible

TYPICAL CHEMICAL & STAIN RESISTANCE	
<i>Covered Spot Test [ASTM D1308] - 3 mil film after 7 day cure:</i>	
<i>E - Excellent; G - Good (slight sign of exposure/stains, coating recovers);</i>	
<i>NR - Not Recommended (Permanent Damage)</i>	
ACIDS	24 hour exposure
Acetic Acid 25% (Vinegar)	E
Citric Acid 10%	E
Lactic Acid (Milk)	E
Phosphoric Acid 85%	E (Clear) / G (Tinted)
Sulfuric Acid 25% (Battery Acid)	E
Sulfuric Acid 98%	G (Clear) / NR (Tinted)
Hydrochloric Acid 32% (Muriatic)	E
Nitric Acid 50%	NR
BASES	
Ammonium Hydroxide 10%	E
EBGE	E
Sodium Chloride 20%	E
Sodium Hydroxide 50%	E
Sodium Hypochlorite (Bleach)	E
Trisodium Phosphate 10%	E
ALCOHOLS	
Ethylene Glycol (Antifreeze)	E
Hand Sanitizer	E
Isopropyl Alcohol 91%	E
Methanol	E
SOLVENTS	
Acetone	E
d-Limonene	E
MEK	E
Methylene Chloride	E
Mineral Spirits	E
PGMEA	E
HYDROCARBONS	
Brake Fluid	E
Transmission Fluid	E
Motor Oil	E
Gasoline	E
Kerosene	E
Hydraulic Fluid	E
Skydrol® – LD-4	E
MISCELLANEOUS	
Coffee	E
Coke®	E
Dish Detergent (Dawn®)	E
Hydrogen Peroxide 3%	E
Ketchup	E
Monster Energy® Drink	E
Mustard	E
Povidone-iodine (BETADINE®)	G
Tide® 1%	E
Windex® (Ammonia Based)	E
Wine – Red	E

For technical assistance call 978-453-8881.

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LIMITED WARRANTY

The manufacturer guarantees its products to be free of defects and the extent of its liability is limited to the purchase price of the materials only, if proved to be defective. Improper mixing, incorrect application or other factors beyond the control of the manufacturer or its dealers may produce unsatisfactory results and cannot be held to be the manufacturers or its dealers responsibility. There are no other guarantees either expressed or implied. (2023)

UMACO ULTRA-GLAZE 450 TECHNICAL DATA

CURE TIMES @ 50% HUMIDITY

	72°F	90°F
Pot Life	2-1/2 hours	1 hour
Working Time	2-1/2 hours	40 minutes
Tack Free	3 hours	2 hours
Recoat Window	N/A	N/A
Light Traffic (foot traffic)	12 hours	9 hours
Heavy Traffic (forklift)	24 hours	16 hours
Chemical Resistance (full cure)	7 days	5 days

CURED COATING PROPERTIES (DRY FILM)

PROPERTY	TEST METHOD	RESULTS
Abrasion Resistance (mg/loss Taber Abraser)	ASTM D4060	16.8 mg loss (gloss)
Hardness (Pencil)	ASTM D3363	3H
Impact	ASTM D2794	140 in. lbs. Direct & Reverse
Adhesion to Steel (Pull Strength, psi (MPa))	ASTM D4541	2,625 psi (18.1 MPa)
Percent Elongation	ASTM D2370	6%
Flash Point (liquid state)	ASTM 3278	200°F (93°C)
Water Absorption (24 Hour Immersion Test)	ASTM C413	<0.02%
Gloss (60°)	ASTM 1455	20°(± 5%)
Viscosity (mixed)	ASTM 2196	383 cP
Volume Solids (mixed)	ASTM D2196	± 90%
VOC's	ASTM D3960	± 43 g/L

APPROXIMATE COVERAGE (DRY FILM)

MIL THICKNESS (WET FILM THICKNESS)	1.15G KIT	4G KIT
2 mils	830 ft ² /kit	2,888 ft ² /kit
2.5 mils	660 ft ² /kit	2,300 ft ² /kit
3 mils	550 ft ² /kit	1,924 ft ² /kit

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