

ULTRA-SHIELD 250

A TWO-COMPONENT, 100% SOLIDS, SOLVENT-FREE, COLORED, EPOXY TOPCOAT WHICH PROVIDES A HIGH-BUILD FINISH & SUPERIOR ADHESION

ULTRA-SHIELD 250 is a two-component, colored, epoxy topcoat which provides a tough, high-gloss finish that combines excellent chemical resistance with superior adhesion when applied to properly prepared concrete. It is 100% solids, non-shrink, highly modified for better UV resistance and low odor. Umaco Ultra-Shield 250 may also be used as broadcast binder for colored flake, colored quartz and aggregates.

TYPICAL USES

- Warehouses
- Kitchens
- Garages
- Laboratories
- Restrooms
- Kennels

ADVANTAGES

- Colored, high-build epoxy
- Resistant to UV degradation
- Durable & long lasting
- Excellent impact resistance
- 100% solids formula
- Low odor
- Easy to maintain
- Superior chemical resistance
- Surface texture is smooth to slight orange peel
- Resistant to algae, fungi, mildew and mold
- Broadcast binder for colored flake and colored quartz systems
- May be blended with metallic pigments

PACKAGING

3 gallon kit: Two 1 gallon (3.78 liters) bottles of Side-A and one 1 gallon (3.78) bottle of Side-B.

15 gallon kit: Two 5 gallon (18.9 liter) pails of Side-A and one 5 gallon (18.9 liter) pail of Side-B.

Mixing Ratio by Volume:

(2) Side-A: (1) Side-B

SURFACE PREPARATION

The concrete substrate must be clean, sound and dry. New concrete should cure for at least 28 days with a minimum compressive strength of 3,500 psi and a minimum pull-off strength of 200 psi. Concrete surfaces must be mechanically profiled to CSP 3-5. Suitable preparation methods include dustless grinding, shot-blasting and scarification. Ultra-Shield 250 will not fill voids or bridge large cracks. All voids and cracks must be patched using Umaco Universal 1023 then allowed to cure. Remove all dirt, dust, spalling or loose concrete, oil, grease, wax, mildew, efflorescence, laitance, curing compounds, form release agents, paint or any other foreign material which might effect the bond.

SEE WARNING REGARDING PAINT REMOVAL. Umaco Ultra-Clean may be used to remove oil or grease stains from concrete surfaces.

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. Refer to Umaco Ultra-Prime MVB data sheet for full instructions and limitations.

MIXING

Umaco Ultra-Shield 250 is sold as kit, (2) Side-A Resin: (1) Side-B Hardener. Pour Side-B into Side-A then mix using a paddle attached to a low speed drill (400-600 RPM) for approximately 90 seconds until one even color develops. Mix only enough material that can be applied within 15-20 minutes at 70° F.

Optional Non-Slip Additive

Where additional slip resistance is required, blend 3.5 ounces of Umaco Sure-Grip per each gallon used for the topcoat.

APPLICATION

Umaco Ultra-Shield 250 can be applied using a 1/4" or 3/8" nap roller, brush, notched-trowel or serrated squeegee and back rolled. This product is best suited for application in temperatures between 55°F to 90°F (50% RH). Maintain recommended temperature and relative humidity during application and curing process. If concrete conditions or over aggressive mixing causes air entrapment, an air release roller tool should be used prior to the coating tacking off to remove the air entrapped in the coating.

COVERAGE

Approximate coverage is 200 ft² per gallon at 7-10 mils.

RECOATING OR TOP-COATING

Before recoating or top-coating, allow the first coat to dry for at least 12-18 hours (at 70°F). Make sure that the first coat has tacked off by pressing on the material with your thumb. If no impression is created, than the surface is ready for recoating or top-coating. Also, check to verify that no epoxy blushes were developed. If blush is present, it must be lightly sanded prior to recoating or top-coating. If more than 18 hours pass before recoating or top-coating, the first coat must be lightly sanded using 60 grit sand paper prior to recoating or top-coating.

Polyaspartic & Urethane Topcoats

Ultra-Shield 250 should be top-coated using Umaco Ultra-Guard 300 (polyaspartic) or Umaco Ultra-Glaze 400 (urethane) when additional chemical, abrasion and UV resistance is required.



Phone: 978-453-8881
Toll Free: 800-442-5535
Fax: 978-453-2416
www.umaco.com

CLEANUP

Clean up mixing station, tools and equipment as required using denatured alcohol. Observe all legal, health and safety precautions when handling or storing solvents and materials particularly in confined spaces.

DISPOSAL

Dispose of empty packaging and other waste in accordance with federal, state, provinces and local regulation.

STORAGE

Umaco Ultra-Shield 250 has a shelf life of one (1) year from date of manufacture in original, factory-sealed containers when stored indoors at a temperature between 60-90°F (15-32°C).

LIMITATIONS

- Do not apply over wet or damp substrates
- Umaco Ultra-Prime MVB must be used prior to application if moisture emission exceeds 3.0 pounds per 1,000 square feet per 24 hours
- Apply when ambient and surface temperatures are between 55°F-90°F (50% RH)
- Substrate temperature must be 5° F above dew point
- New concrete must cure 28 days
- Apply a suitable primer before using this product in order to avoid outgassing and the development of surface defects.
- Restrict the use of floor to light traffic and non-harsh chemicals until the coating has fully cured

MAINTENANCE

For maximum life expectancy, routinely sweep and wash floors with appropriate cleaners and detergents such as Umaco Ultra-Clean. All chemicals or abrasive grit should be removed as soon as possible.

TECHNICAL DATA

Solids by Weight: 100%
Solids by Volume: 100%
VOC's: 0 g/l
Coverage per Gallon (7-10 mils): 200 ft²/gal
Finish Characteristics: Gloss
Flexural Strength (ASTM D-790): 4000 psi
Compressive Strength (ASTM D-695): 15,000 psi
Bond Strength (ASTM D-4541): >400 psi
Impact Strength: MIL D-3134
No Chipping, Cracking or Delaminating
Tensile Strength (ASTM D-638): 4,000 psi
Hardness (ASTM D-2240): Shore D = 75-80
Yellow Index (ASTM D-1925): <15 @ 2000 hours
Abrasion Resistance (ASTM D-4060): Taber Abrader CS-17 calibrase wheel with 1000 gram total load and 1000 cycles = 0.15 grams
Water Absorption, max (ASTM D-570): 0.2%
Flammability (ASTM D-635): Self-Extinguishing
Antimicrobial Resistance (ASTM G-21): Passes
Coefficient of Friction (ASTM D-2047): 0.7 Smooth, 0.8 Orange Peel
Application Temperature: 55°F to 90°F (50% RH)
Pot Life (70°F, 50% RH): 15-20 minutes
Tack Free (70°F, 50% RH): 5-6 hours
Recoat or Topcoat (70°F, 50% RH): 12-18 hours
Light Foot Traffic (70°F, 50% RH): 12-18 hours
Full Cure (70°F, 50% RH): 72 hours

WARNING

Harmful if inhaled. Harmful if swallowed. May cause eye irritation. May cause allergic skin reaction. Before using, read the Safety Data Sheet and follow all precautions to prevent bodily harm.

WARNING! If you scrape, sand or remove old paint, you may release lead dust or fumes. **LEAD IS TOXIC. EXPOSURE TO LEAD DUST OR FUMES CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE.**

Before you start, find out how to protect yourself and your family by contacting the USEPA National Lead Information Hotline at 1-800-424-LEAD or log onto www.epa.gov/lead. Wear a properly fitted respirator and prevent skin contact to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Follow these instructions to control exposure to other hazardous substances that may be released during surface preparation.

For technical assistance call 978-453-8881.

www.umaco.com

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. (2026)

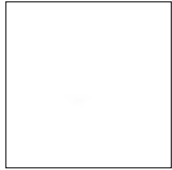
Umaco, Inc.
60 Rear Newhall Street
Lowell, MA 01852



Toll Free: 800-442-5535
Phone: 978-453-8881
Fax: 978-453-2416

ULTRA-SHIELD 250 COLOR CHART

Samples below are just a representation of the actual color. For exact color, request a draw down sample.



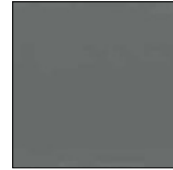
White



Light Gray



Medium Gray



Dark Gray



Charcoal



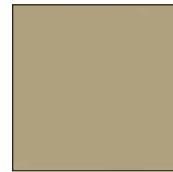
Black



Light Tan



Tan



Sand Beige



Brown Stone



Tile Red



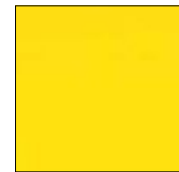
Fast Red



Rich Blue



Leaf Green



Safety Yellow

MADE IN

U. S. A.

"The Professional's Choice"

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