

ULTRA-SHIELD 250

A TWO-COMPONENT, COLORED, 100% SOLIDS, EPOXY TOPCOAT WHICH PROVIDES A TOUGH, HIGH-GLOSS 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 flakes, colored quartz and aggregates.

TYPICAL USES

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

ADVANTAGES

- UV resistant
- Durable & long lasting
- Excellent impact resistance
- 100% solids formula
- Stain resistant
- Easy to maintain
- Low viscosity
- Superior chemical resistance
- Meets USDA requirements

PACKAGING

3 gallon kit: Two 1 gallon (3.78 liters) cans of Side-A and one 1 gallon (3.78) can 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) Part-A: (1) Part-B

SURFACE PREPARATION

The concrete substrate must be clean, sound and dry. New concrete should cure for at least 30 days. 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. The minimum pull off strength of the substrate is 200 psi. 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. The concrete must have a surface profile of CSP 3-5. 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. Refer to Umaco Ultra-Prime MVB data sheet for full instructions and limitations.

MIXING

Umaco Ultra-Shield 250 is sold as kit, (2) Part-A Resin: (1) Part-B Hardener. Pour Part-B into Part-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 30-40 minutes at 70° F.

Optional Non-Slip Additive

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

APPLICATION

Umaco Ultra-Shield 250 can be applied using a 1/4" nap roller, brush, notched-trowel or serrated squeegee and back rolled. This product is best suited for application in temperatures between 60°F to 90°F with relative humidity below 85%. 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.

Broadcast Binder

Umaco Ultra-Shield 250 may be used in broadcast systems when using colored flakes, colored quartz and aggregates to achieve a variety of color and texture patterns.

RECOATING OR TOPCOATING

Before recoating or topcoating, allow the first coat to dry for at least 8-12 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, then the surface is ready for recoating or topcoating. Also, check to verify that no epoxy blushes were developed. If blush is present, it must be removed prior to recoating or topcoating by using a standard detergent cleaner such as Umaco Ultra-Clean. If more than 16 hours pass before recoating or topcoating, the first coat must be lightly sanded using 60 grit sand paper prior to recoating or topcoating.

Polyaspartic & Urethane Topcoats

Ultra-Shield 250 may be top-coated using Umaco Ultra-Guard 300 (polyaspartic) or Umaco Ultra-Glaze 400 (urethane) when additional chemical, abrasion and UV resistance is required. Contact a Umaco representative to discuss which topcoat is right for your project.



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COVERAGE

Approximate coverage is 53-130 ft² per gallon at 12-30 mils.

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 regulations

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 on wet or damp substrate
- 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 60°F-90°F
- 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 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: Less than 2 g/l
Colors: Light Gray, Medium Gray, Dark Gray, Tile Red and Beige
Coverage per Gallon (12-30 mils): 53-130 ft²/gal
Finish Characteristics:
Gloss (70-90 at 60 degrees at glossmeter)
Abrasion Resistance:
Taber abraser CS-17 calibrate wheel with 1000 gram total load and 500 cycles = 32 mg loss
Flexural Strength (ASTM D790): 5,400 psi
Compressive Strength (ASTM D695): 9,100 psi
Tensile Strength (ASTM D638): 4,800 psi
Hardness: Shore D = 80
Adhesion: 450 psi at elcometer (concrete failure, no delamination)
Viscosity (Mixed): 1300-2300 cps typical
Ultimate Elongation: 3.1%
Gardner Variable Impactor: 50 inch pounds direct - passed
Application Temperature: 60-90°F
Pot Life (1-1/2 Gallon): 30-50 minutes
Tack Free (Dry to Touch): 5-8 hours
Recoat or Topcoat: 8-12 hours
Light Foot Traffic: 12-14 hours
Full Cure (Heavy Traffic): 2-7 days

CHEMICAL RESISTANCE

Xylene: 8 hour term splash spill
Trichloroethylene: 2 hour term splash spill
Methanol: not recommended
Ethyl Alcohol: 2 hour term splash spill
Skydrol: 2 hour term splash spill
10% Sodium Hydroxide: long term immersion
50% Sodium Hydroxide: 72 hour immersion
10% Sulfuric Acid: 8 hour term splash
70% Sulfuric Acid: not recommended
10% HC1 (aq): 8 hour term splash spill
5% Acetic Acid: 2 hour term splash spill

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. (2021)

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