

UPC 2500 Water-Based Epoxy

Product Description

UPC 2500 Water-Based Epoxy is a two-component, 0-VOC premium water-based epoxy system. It can be used as a concrete base coat for decorative Poly-Chips/Mica Chips, or an effective Primer/Sealer. Its chemistry provides excellent bonding characteristics and the toughness of conventional epoxies. Its design features provide for the highest industrial and commercial demands.

Advantages:

- Fast-Drying (1-2 Hr)
- 0 VOC
- Self-Priming
- Extended Pot Life (1 Hr)
- Epoxy Toughness
- 1-Day Garage System
- Higher Moisture Tolerance
- High Color Stability
- Seamless Floor System
- Low Odor
- Easy Clean-up
- Apply over 15-day Concrete

Applications

The versatility of its chemistry allows UPC 2500 Water-Based Epoxy to be used on any concrete surface, including the following:

- Garage Floors
- Warehouse Floors
- Aisle Ways
- Show Rooms
- Auto Service
- Dining Areas
- Grocery
- Retail Facilities
- Lobbies
- Schools and Hospitals

Colors

UPC 2500 Water-Based Epoxy is available in Clear, and the following standard colors. Broadcasting decorative Poly-Chips or Mica Chips helps to create endless color combinations. Pigmented base is recommended for Chip Broadcast installation to provide uniformity in the coating.

- Clear
- Beige
- White
- Gray

Packaging

UPC 2500 Water-Based Epoxy is available in two different 4:1 kit sizes:

	Part A	Part B
Unit 1 Kit	Pre-measured	Pre-measured
5 Gallon Bulk Kit	4 Gallons	1 Gallon

Testing

All surfaces are not the same. It is recommended that a sample area be done before the start of the project. The test should be done on-site to insure proper adhesion and desired finish.

Product Data

PROPERTY	VALUE	REFERENCE
V.O.C.	0 g/l	
Volume Solids	50%	
Bond to Concrete	350 psi.	
Pencil Hardness	F	
Gloss 60*	90	
Taber Abrasion	Loss/1000 Cycles =110 mg	ASTM D 4060 CS 17 Wheels
Direct Impact	40 in.-lb.	
Reverse Impact	8 in.-lb.	
Coefficient of Friction	0.6 minimum	ASTM D 2047

Product Data

Coverage:	150-250 SF/gal as Base Coat 250-350 SF/gal as Primer/Sealer
Application temperature:	65-90°F and 5°F above dew point
Thinning:	Not required
Pot Life:	1+ hours
Working Time on Floor:	10-15 minutes
Cure time:	2-3 hours (Foot Traffic) 12 hours (Vehicle Traffic)
Critical recoat time:	18 hours
Shelf life:	12 months
USDA Food & Beverage:	Meets Requirements

Concrete Preparation

Before coating is applied, concrete must be:

- Dry – No puddled water
- Clean – Contaminants removed
- Profiled – ICRI-CSP 2-3
- Sound – Cracks and spalled areas repaired and ground

Mechanical preparation is the preferred method of preparing concrete for coating application. Shot-blasting or diamond grinding are recommended to achieve ICRI-CSP (surface profile) 2-3.

Patching

Void, cracks and imperfections will be seen in finished coating if the concrete is not patched correctly. Patch concrete with UPC Perfect Patch. After the patching material is cured, diamond grind patch.

Mixing

The ratio of UPC 2500 Water-Based Epoxy is 4 to 1. That is, four parts A (resin) to one part B (hardener). Mix the following with a drill and mixing paddle. Note: Use a low speed drill (not to exceed 300 rpm) to prevent air entrapment.

1. The Unit 1 kit allows the UPC 2500 Part A container to be used as the complete mixing container. Premix Part A for 30-45 seconds to achieve a uniform mixture.
2. Add entire contents of UPC 2500 Part B to Part A container and mix for 2-3 minutes.
3. If using the Bulk 5-Gallon Kit, premix UPC 2500 Part A for 30-45 seconds. This will also be the mixing container.
4. Add 1 gallon of UPC 2500 Part B to Part A container and mix for another 2-3 minutes.
5. Note: If using only a partial bulk kit, it is crucial to ratio the 4:1 material accurately in a clean mixing container, following mixing guidelines.

Decorative Chip Broadcast Instructions

UPC 2500 Water-Based Epoxy is generally installed as an 8 mil coating system, applied in one pass as a base coat over concrete. Chip Broadcast installation requires two applicators using spiked shoes to complete installation successfully.

1. Tape off work areas to protect from foot traffic during application and drying.
2. Optimum ambient temperature should be between 65-90°F during application and 5°F above dew point.
3. Mix using the mixing instructions above.
4. In higher temperatures and dry environments, pre-wetting the concrete with a pump sprayer will extend working time and prevent flash-drying. Be sure to apply only enough clean water to dampen concrete, and avoid puddles.
5. Work in manageable sections. Try working from control joint to control joint if possible.
6. Apply approximately 200 SF per gallon by pouring out on surface in a ribbon. Using a squeegee, pull material from wall to wall over substrate while covering surface evenly.
7. The second applicator, using spiked shoes and a chip brush, can now cut in corners and edge detail. Then, using a 9" x 3/8" non-shedding paint roller, roll coating forward and backward to further level the material.
8. Quickly back roll in the opposite direction, using a 9" or 18" x 3/8" paint roller from wall to wall to perfectly level and smooth surface.
9. Once roller lines have flattened out, immediately broadcast decorative Poly-Chips or Mica Chips (within 10-15 minutes) by tossing them into the air and allowing them to gently fall down into the wet resin.
10. Allow to cure completely. Then scrape or sand the basecoat in all directions. Vacuum substrate thoroughly.
11. Apply seal coat of 5500 Clear Premium Epoxy or 7000-series Polyaspartic at approx. 100-200 S/F per gallon.

Primer/Sealer Application Instructions

To apply UPC 2500 Water-Based Epoxy as a Primer or Sealer, begin with Application Instruction steps 1-5 for Chip Broadcast.

1. Apply approximately 250-350 SF per gallon by pouring out on surface in a ribbon. Using a squeegee, pull material as thin as possible from wall to wall over substrate while covering surface evenly.
2. The second applicator, using spiked shoes and a chip brush, can now cut in corners and edge detail. Then, using a 9" x 3/8" non-shedding paint roller, roll coating forward and backward to further level the material.
3. Quickly back roll in the opposite direction, using a 9" or 18" x 3/8" paint roller from wall to wall to perfectly level and smooth surface.

Clean-up

UPC 2500 Water-Based Epoxy, while in an un-reacted state, may be cleaned up with water and soap. Acetone may be needed once the resin begins hardening.

Product Limitations

Ground level concrete slabs emit invisible moisture vapor. The allowable moisture emissions for concrete are 5 lbs / 1,000 SF over a 24 hour period. Relative Humidity results should be below 85% per ASTM F2170. If moisture is above this level, then blistering and delamination of coating may occur. A calcium chloride test can be performed to determine concrete moisture level. If moisture levels exceed the 5 lb. limit, a concrete moisture vapor control system should be used first before applying coating system. Please contact the UPC technical department for approved systems.

Coating systems are susceptible to cracking if the concrete moves or separates below the coating. Hence, joint and crack treatment should be reviewed prior to coating application. As a general rule, control joints (saw cuts) and random cracks should be saw-cut or chased first then filled with Perfect Patch or similar approved hard epoxy product. Construction/cold joints (two slabs which meet and hence move) should be treated. After the coating has been applied and cured, saw cut through the coating over construction joints and apply an elastomeric caulking.

Warranty

Universal Polymer Coatings products are warranted for one year after date of purchase. Please refer to the UPC Limited Material warranty for additional clarification.

Safety

Consult UPC 2500 Water-Based Epoxy material safety data sheet. Avoid contact with skin. Some individuals may be allergic to epoxy resin. Protective eyewear, gloves and clothing are recommended.