

UPC 9200 Novolac Epoxy

Product Description

UPC 9200 (Novolac Epoxy) is an advanced, high performance novolac, two-component overlayment and coating system. It has the highest chemical resistance in the industry today. It is generally applied between 1/16" and 1/4" with silica with a topcoat. Its design features provide for the harshest chemical conditions.

ADVANTAGES:

- Low Odor
- Resin Rich
- VOC Compliant
- Withstands heavy traffic
- Nonporous
- Seamless flooring system
- Chemically resistant
- Harder than Standard Concrete

Applications

The versatility of its chemistry allows UPC 9200 to be used in the following applications:

- Chemical Flooring
- Aerospace
- Chemical Storage
- Power Plants
- Trench and Sumps
- Commercial Kitchens
- Pharmaceutical Plants
- Animal Kennels
- Pulp & Paper Mills
- Acid Cleaning Facilities

Colors

UPC 9200 is available in clear and the following colors. UPC standard colors are:

- Clear
- Smoke
- Black
- Sand Beige
- White
- Safety Red
- Light Gray
- Tile Red
- Medium Gray
- Blue
- Dark Gray
- Yellow
- Light Beige
- Green

Custom colors are available at an additional charge.

Nonporous Resin Rich Technology

Conventional trowel down epoxy-clad systems are porous. Once the seal coat is breached, the porous epoxy mortar, being sponge-like, draws surface liquids and chemicals into it. This accounts for an epoxy overlayment failure. Novolac Epoxy is nonporous, using twice the resin in the base overlayment than its clad counterpart.

Packaging

UPC 9000 is available in two different kit sizes:

	Part A	Part B
Unit 1	Pre-measured A	Pre-measured B
15 Gallon Kit	10 gal.	5 gal.

Physical Properties

PROPERTY	VALUE	REFERENCE
Compressive Strength	13,750 psi	ASTM C 579
Flexural Strength	5,475 psi	ASTM D 790
Tensile Strength	2,400 psi	ASTM D 307
Bond to Concrete	350 psi	ASTM D 4541
	Concrete fails at this point	
Taber Abrasion	Loss/1,000 Cycles=26 mg	ASTM D 4060 CS 17 Wheels
Water Absorption	.10% Max.	ASTM D 413
Linear Shrinkage	.01% Max.	ASTM C 531
Flammability	Self-Extinguishing	ASTM D 635
Hardness, Shore D	85	ASTM D 2240
Impact Resistance	16 ft/lb. – No Failure	Mil-D-3134H
Coefficient of Friction	.6 Minimum	ASTM D 2047
Porosity on Unglazed Finish	.00	NACE Standard TM-01-74

Product Data

Volumetric Ratio:	2 to 1
Solids:	100% (+ or - 1%)
Application temperature:	65-90°F
Thinning:	Not required
Pot life:	10-15 minutes
Working time on floor:	20-30 minutes
Cure time:	6-8 hours (walking) 24 hours (traffic)
Critical recoat time:	24 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

Voids, 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.

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, using the proposed method by the assigned applicator to insure proper adhesion and color. A sample area should also be done on any existing coatings to determine if any contaminants exist or if delaminating will occur.

Mixing

The ratio of UPC 9200 is 2 to 1. That is, two parts A (resin) to one part B (hardener). Generally, three mixed gallons of UPC 9200 is ideal for application. Mix the following with a drill and mixing paddle. Note: If using a drill mixer, use a low speed (not to exceed 300 rpm) to prevent air entrapment.

1. The Unit 1 kit allows the UPC 9200 Part A container to be used as the complete mixing container. Premix UPS 9200 Part A for 30 seconds. Add entire contents of UPC 9200 Part B and mix for 3 minutes.
2. If using the Bulk 15-Gallon Kit, premix UPC 9200 Part A for 30-45 seconds. Pour out 2 gallons into an empty 5-gallon bucket, which then becomes the mixing bucket.
3. Add 1 gallon of UPC 9200 Part B and mix for another 3 minutes.
4. UPC 9200 is designed to be immediately poured on the floor. Leaving mixed product in the container will greatly reduce pot life. Once poured out on the floor, 10-15 minutes of working time can generally be expected.

Application Instructions

Application of UPC 9200 for a nominal 16 mil coating system is applied in two coats and in one pass as a top coat.

1. Always apply in descending temperatures. Concrete is porous and traps air. In ascending temperatures (generally mornings) the air expands and can cause out gassing in the coating. It is safer to apply coatings in the late afternoon, especially for exterior applications.
2. Optimum ambient temperature should be between 65-90°F during application.
3. Mix using above mixing instructions.
4. Apply approximately 100 SF per gallon by immediately pouring out on surface in a ribbon, while walking and pouring at the same time until bucket is empty.
5. Using a squeegee, pull UPC 9200 over substrate. As a first coat

over bare concrete, pull resin as thin as possible while still wetting out concrete and uniformly covering surface. This allows trapped air to escape more easily.

6. Using a 3/8" non-shedding phenolic (plastic) core paint roller, roll coating forwards and backwards.
7. Lastly, back roll in the opposite direction as step 6.

Silica Sand Broadcast Instructions

1. Silica Sand Broadcast: Following Step 6 above, gently throw the silica sand up into the air, allowing it to fall without lumping in one spot or moving the resin. Do this until the floor is totally saturated with the silica sand and the resin will not accept any more. This generally requires 1/2 to 3/4 lbs. per S/F. Allow to dry for 6-8 hours.
2. Sweep floor and stone any high spots.
3. Following either method, apply seal coat of 9200 Novolac or 7000 Series Hybrid Urethane at approx. 100 S/F per gallon.

Clean-up

UPC 9200, while in an un-reacted state, may be cleaned up with isopropyl alcohol or acetone. A strong solvent like methylene chloride may be required if resin is set up.

Product Limitations

Ground level concrete slabs emit invisible moisture vapor. The allowable moisture emissions for concrete are 3 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 3 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 UPC Perfect Patch. 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 9200 material safety data sheet. Avoid contact with skin. Some individuals may be allergic to epoxy resin. Protective eyewear, gloves and clothing are recommended.