

## LOW-MODULUS, EPOXY URETHANE CO-POLYMER

### DESCRIPTION

EPX50-OVERLAY is a moisture-insensitive, low-modulus, epoxy urethane co-polymer overlay resin.

### APPLICATIONS

EPX50-OVERLAY is designed primarily for bonding skid-resistant overlays to bridges, elevated slabs and PCCP. In addition to High Friction Surface Treatments, it is also excellent as a binder in epoxy mortars used for patching concrete.

### ADVANTAGES

- Epoxy urethane technology
- Excellent bond strength
- Moisture insensitive
- Nonflammable
- Easy to mix - 1:1 ratio, color coded
- Retains tensile elongation at low temperatures
- No primer required
- Designed for automated pump or hand mix application
- Non-regulated, hazmat certification or placards not required for transport

### COMPLIANCES

- Above 75°F: ASTM C881 (Type III. Grade 1. Class B & C.)
- Below 75°F: ASTM C881 (Type III. Grade 2. Class B & C.)
- AASHTO
- VOC compliant
- Transportation within the United States is non-regulated by the DOT

### PACKAGING

2-gallon unit

- Component A: (1) 1-gallon can
- Component B: (1) 1-gallon can

10-gallon unit

- Component A: (1) 5-gallon pail
- Component B: (1) 5-gallon pail

110-gallon unit

- Component A: (1) 55-gallon drum
- Component B: (1) 55-gallon drum

500-gallon unit

- Component A: (1) 250-gallon tote
- Component B: (1) 250-gallon tote

**Appearance of Components:** A - Blue, B - Yellow

**Shelf Life:** 2 years in original unopened container

**Storage:** 50°F to 95°F in dry and dark conditions

**Temperature Considerations: IMPORTANT!** Epoxy resins are temperature sensitive and care should be taken to condition all components to between 65°F to 95°F for a minimum of 24 hrs. prior to mixing and placement. Temperatures colder than stated range increase viscosity of resins and inhibit mixing and flow of materials. Temperatures warmer than stated range decrease viscosity of resins, hasten the cure and reduce the working time. Mixing and curing at less than ideal temperatures, <60°F or >95°F, will require special considerations.

### COVERAGE

Minimum Coverage Rates (3/8" overlay):

	Epoxy	Aggregate
Course 1	1 gallon/40 sq. ft.	10 lbs./sq. yd.
Course 2	1 gallon/20 sq. ft.	14 lbs./sq. yd.

### CURE TIME

Use the table below to determine minimum cure times based on the temperature of the overlay materials and substrate.

	Average Temperature of Materials & Substrate (°F)							
Cure Temp	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Course 1	5 hrs	4.5 hrs	3.5 hrs	3 hrs	2.5 hrs	2 hrs	1.5 hrs	1 hr
Course 2	8 hrs	6.5 hrs	5.5 hrs	5 hrs	4 hrs	3 hrs	2 hrs	2 hrs

\*Set times are merely averages. Site conditions will dictate actual cure response for sweeping of 1<sup>st</sup> & 2<sup>nd</sup> layers, as well as open to traffic time.

### INSTALLATION

Bonding Skid-Resistant Overlays

**Surface Preparation:** Repair delamination, potholes and cracks with EP-Patch. Clean surface by shot-blasting to remove all contaminants, ICRI Level 5 minimum. Remove dust and debris by blowing off with oil-free compressed air.

**Mixing:** Mechanically mix Component A with Component B 1:1 by volume with Jiffy type mixer and low-speed variable drill at 300 rpm for a minimum of 3 minutes. Mix only the quantity that can be used within its gel time. **BULK:** For bulk mixing, a positive displacement pump, incorporating a static mixing wand and meter, is recommended.

**Placement:** Apply neat EPX50-OVERLAY by 3/16" to 1/4" notched squeegee at the specified rate. Broadcast select aggregate to refusal. The aggregate should be angular grain or fractured Flint, Basalt or Bauxite having less than 0.2% moisture and free of dirt, clay, etc. The aggregate should have a minimum MOHS scale hardness of 7 unless otherwise approved. After initial cure of first course, remove excess aggregate. Do not open to traffic. Apply second course of epoxy and aggregate at specified rate. Remove excess aggregate. Allow to cure following the table herein. Open to traffic.

### LIMITATIONS

- For professional use only
- Do not thin with solvents
- Minimum age of concrete must be 28 days before applying as an overlay, unless otherwise approved by E-Chem.
- Consult with E-Chem representative when used on exterior slabs on grade subject to freezing.
- Consult with E-Chem representative for project specific directions when using as Binder for Epoxy Mortar.
- EPX50-OVERLAY is a vapor barrier after curing.
- Substrate temperatures must be 50°F and rising prior to installation; 50°F must be maintained minimum of 8 hours post installation or meet curing guidelines stated above for proper cure.

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- Consult E-Chem representative for guidelines when using EPX50-OVERLAY as a binder in epoxy mortars used for patching concrete.
- Consult E-Chem representative when mixing or placing outside of the temperature recommendations listed.

#### **CLEAN UP**

**EQUIPMENT:** Uncured material can be removed with C-Clean100 or approved solvent. Cured material can only be removed mechanically.

**MATERIAL:** Collect with absorbent material. Flush area with water. Dispose of in accordance with local, state and federal disposal regulations.

#### **CAUTIONS**

##### **READ SDS PRIOR TO USING PRODUCT!**

- Component A: Irritant
- Component B: Irritant
- Product is a strong sensitizer. Use of safety goggles and chemical resistant gloves are recommended.
- Use in a well-ventilated area and avoid breathing vapors
- Use of a NIOSH/MSHA organic vapor respirator is recommended if ventilation is inadequate.
- Avoid skin contact

#### **FIRST AID**

**EYE CONTACT:** Flush immediately with water for at least 15 minutes. Contact physician immediately.

**RESPIRATORY CONTACT:** Remove person to fresh air.

**SKIN CONTACT:** Remove any contaminated clothing.

Remove epoxy immediately with a dry cloth or paper towel. Solvents should not be used as they carry the irritant into the skin. Wash skin thoroughly with soap and water.

**IF INGESTED:** Do not induce vomiting. If swallowed give water to drink. Seek medical treatment immediately.

**GENERAL:** Remove contaminated soaked clothing immediately. In the event of persistent symptoms receive medical treatment.

**CURED EPOXY RESINS ARE INNOCUOUS.**

#### **WARRANTY**

This product is warranted and guaranteed to be of good quality. Manufacturer, as its sole and exclusive liability hereunder, will replace material if proved defective. This warranty and guarantee are expressly in lieu of all others, express or implied, including any implied warranty of merchantability or fitness for a particular purpose and may not be extended by representatives or any persons, written sales information, or drawing in any manner whatsoever. While the manufacturer recommends uses for the product based on tests believed reliable, no warranties, express or implied, or guarantees can be given as to particular methods of use or application, nor can performance be warranted, expressly or impliedly, or guaranteed under special conditions. Distributors, salespersons or company representatives are not authorized to extend or vary any warranties or guarantees beyond those outlined herein, nor may the manufacturer's or seller's limitation of liability be waived or altered in any manner whatsoever.