EPX50-RC

FAST-SETTING, LOW-MODULUS, EPOXY URETHANE CO-POLYMER

DESCRIPTION

EPX50-RC (Rapid Cure) is a fast setting, moisture-insensitive, low-modulus, 1/4 in. - 3/8 in. one or two layer chemical and waterproof epoxy urethane co-polymer overlay that provides an anti-skid surface for bridge decks and elevated slabs. It may also be used for high friction surface treatment applications and as a binder in epoxy mortars for patching.

APPLICATIONS

- Bridge Decks
- Elevated Slabs
- Parking Decks
- Roadway high friction surface applications
- Patching Mortar

ADVANTAGES

- Fast-setting for quicker turnaround
- Epoxy urethane technology
- Excellent bond strength
- Moisture insensitive
- Nonflammable
- Easy to mix - 1:1 ratio, color coded
- No primer required
- Designed for plural component pump or hand mix applications

COMPLIANCES

- ASTM C881 / AASHTO M235 TYPE III
- VOC Compliant

PACKAGING

2-gallon unit

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

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

Shelf Life: 2 years in original unopened containers
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 between 65 °F to 95 °F. Mixing and curing at less than ideal temperatures <50 °F or >100 °F will need written notice/instructions from E-Chem.

COVERAGE

Minimum Coverage Rate - (1/4 in.)
HFST coverage is project specific

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

CURE TIME

	Average Temperature of Materials & Substrates							
Cure Temp (°F)	50	55	60	65	70	75	80	85+
Time* (hr)	4.5	4	3.5	3	2.5	2	1.5	1

*Set times are averages. Site conditions will dictate actual cure response times.

INSTALLATION

Surface Preparation: Repair delaminations and potholes prior to installation of EPX50-RC. Polymer patching, such as E-Chem's EP-PATCH or EPC-OVERLAY, may be used for small patching repairs. Contact E-Chem for mixing procedures when EPX50-RC is used as a patching system. Treatment of visible/moving cracks may be required prior to installation of EPX50-RC; Contact E-Chem representative for recommendations.

Bridge Decks and HFST on Concrete: Clean surface by shot-blasting to a minimum ICRI level 5 to remove all contaminants, tar, pavement markings that may interfere with resin bonding directly to surface. Remove dust and debris by blowing off with oil-free compressed air. Tape all joints and drains to prevent resin from entering. Tape shall be placed on the center line if the entire area will not be coated in the same application. The tape shall cover a 2" area on top of the first application so that a staggered joint will be present. This staggered joint is to prevent a single vertical joint in the center of the applied area.

High Friction Surface on Asphalt: Clean surface with sweeper and/or oil-free compressed air. Remove all tar/joint sealant, asphalt residue, etc that may interfere with resin bonding directly to asphalt.

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Mixing:
Hand Mixing: Mix Component A with Component B 1:1 by volume with a Jiffy Mixer using a low-speed variable drill at 300 rpm for a minimum of 3 minutes. Mix only the quantity that may be used within the gel time.
Mechanical Mixing: Mix components using a positive displacement pump that is capable of heating, metering and dispensing polymer resin via a static mixer.

Placement: Apply neat EPX50-RC with a 1/4 in. to 3/8 in. notched squeegee at the specified rate. Broadcast select aggregate to refusal. The aggregate should be grain/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. Apply second course aggregate until refusal. A flat squeegee may be used to apply the second course. Remove excess aggregate. Allow both courses to fully cure prior to opening traffic. Contact E-Chem representative for cleaning/installation requirements when traffic is allowed on the prepared surface or between layers.

LIMITATIONS

- For professional use only
- Do not thin with solvents
- Minimum age of concrete must be 28 days before applying and minimum age of asphalt must be 30 days, unless otherwise approved by E-Chem
- Consult E-Chem representative when used on exterior slabs on grade subject to freezing or for project specific directions when using as binder for epoxy mortar
- EPX50-RC is a vapor barrier after curing
- Substrate temperatures must be 45 °F and rising prior to installation. Greater than 50 °F must be maintained during the entire curing period.
- Consult E-Chem representative when mixing or placing outside of the temperature recommendations listed

CLEAN UP

Equipment: Uncured material may be removed with C-CLEAN100 or approved solvent. Cured material may need to be mechanically removed.
Material: Collect with absorbent material. Flush area with water. Dispose of in accordance with local, state and federal disposal regulations.

CAUTIONS

READ ENTIRE SDS PRIOR TO USING PRODUCT!

- Component A: Irritant
- Component B: Irritant
- Product is a strong sensitizer - wear chemical resistant gloves, protective clothing, eye protection and face protection
- 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 product 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 URETHANE 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 proven 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 or seller's limitation of liability be waived or altered in any manner whatsoever. For additional details, please refer to the Terms and Conditions.

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PHYSICAL PROPERTIES[1,2,3]

Property	Standard	Units	Values
Viscosity (75 °F)	ASTM C881	cP	1,500 - 2,000
Gel Time (75 °F)		Minutes	15-20
Shore D Hardness	ASTM D2240	Shore D	70-75
Absorption	ASTM D570	%	<0.1
Flexural Strength	ASTM D790	psi	>5,000
Bond Strength (14-day cure)	ASTM C882		>2,000
Compressive Modulus (Neat)	ASTM D695		<120,000
Compressive Strength (3 hours w/sand)	ASTM C579		>2,000
Compressive Strength (24 hours w/sand)			>7,000
Compressive Strength (7 days w/sand)			>8,000
Tensile Strength (75 °F)	ASTM D638		>3,000
Tensile Elongation (75 °F)		%	50 - 60
Adhesion to Concrete	C1583/D7234 ACI 503R	psi	>450 (concrete failure)
Cure Rate (75 °F)	ASTM D1640	Hours	≤2
Chloride Ion Permeability	AASHTO T277	Coulombs	0
Thermal Compatibility	ASTM C884	Pass/Fail	Pass
Percent Solids	ASTM D2369	%	100

1. Product testing results based on representative lot(s). Average results will vary according to the tolerances of the given property.
2. Full cure time is listed above to obtain the given properties for each product characteristic.
3. Results may vary due to environmental factors such as temperature, moisture and type of substrate.

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