



IPA SYSTEMS

# IPANOL E-FLEX

## Flexible Epoxy Overlay System



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### QUALITY PRODUCTS FOR THE CONCRETE /MASONRY REPAIR INDUSTRY

#### Description

**Ipanol E-Flex** is a 100% solids, two component, Low Viscosity, solvent free, moisture insensitive epoxy bonding agent. It meets ASTM C-881, Type III, Grade 1, Classes B&C.

#### Where to Use

Ipanol E-Flex is used for bonding skid resistant overlays to concrete and other types of approved substrates. Mixed with approved aggregates, it can be used as an epoxy repair mortar. Application use: parking decks, pedestrian walkways, bridge decks, loading docks, joint nosings, industrial plants, and concrete repair.

#### Advantages

- ◆ Made in America
- ◆ Low modulus, low viscosity and flexible
- ◆ Open to traffic within 3 hours at 77°F (25°C)
- ◆ 1:1 mixing ratio, easy to mix
- ◆ Moisture insensitive, nonflammable
- ◆ Excellent bond strength
- ◆ Multiple applications

#### Coverage Rate

Bridge decks & Heavy duty overlay system:                   **1st Coat-** 40 sq. ft. per gal.   **2nd Coat-** 20 sq. ft. per gal.

Epoxy mortar: Sand to resin—3 to 5 parts sand/ aggregate :1 part of resin, by volume

#### Packaging

2 gallon, 10 Gallon and 110 Gallon Units (37.85 liter and 416.35 liter)

Shelf Life: One year in unopened containers. Store in a cool dry place out of direct sunlight. Keep from freezing.

#### Technical Data

##### Resin Properties

Tensile Strength:	D-638	3,000 psi
Tensile Elongation:	D-638	50%
Compressive Strength:	C-579	7,000 psi
Bond Strength: (14 day cure)	C-882	3,200 psi
Gel Time:	C-882	15 Minutes
Viscosity:	C-881	1500 cps

##### Epoxy Mortar Properties

Compressive Strength	C-579-91 Method B
3 hrs @ 75°F (24°)	1300 psi (9 MPa)
3 1/2 hrs @ 75°F	2200 psi (15 MPa)
48 hrs @ 75°F	6800 psi (47 MPa)

Mix Ratio: 1:1

Working time: 15 to 20 minutes-higher temperatures reduces working time.

Approximate cure time: 4 hrs at 65° F.....2 hrs at 75°F.....1 hr at 85°F

Do not open to traffic until fully cured.

#### Surface Prep

Substrate to be repaired must be cleaned of any film, scale, loose material, oils, grease and any other foreign material that will prohibit bond. Surface preparation must be achieved by mechanical means and methods. Shot blasting, sandblasting and/or scarification are the preferred methods. Other methods to be determined and accepted by Engineer.

Prior to placing the first coat of epoxy, the installer shall perform test method ACI 503-R, as described in Appendix A of the ACI Manual of Concrete Practices. This will determine cleaning method and bond strength of the coating to the existing substrate.

**IPA SYSTEMS, INC**

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### Mixing

Pre-mix both components individually for 2 to 3 minutes. Using a clean mixing container, slowly place 1 part by volume of component B into 1 part by volume of component A. Mix thoroughly for 3 minutes with a jiffy mixer on slow speed (250 rpm). Mix only the amount of product that can be placed during the working life of the product. \* Product working time will vary according to temperature. For best results, precondition epoxy to 75° F (24° C) before application.

### Application

An epoxy overlay system will require two courses. Application of epoxy binder will be performed by roller, squeegee or approved pumping equipment. Application rate will depend on surface profile and porosity of the concrete. (**refer to coverage rates**)

**1st application:** is applied at specified rate with a 3/16" notched squeegee. Immediately following the application of epoxy resin, broadcast approved aggregate into the epoxy resin completely covering the epoxy to excess. Allow for no resin bleed and continue broadcasting aggregate until resin is covered. Allow to dry. Remove excess aggregate once the system has dried. Methods for removal of aggregate are: by broom, oil free compressed air or vacuum.

**2nd application** is applied at specified rate with a flat squeegee. Immediately following the application of epoxy resin, broadcast approved aggregate into the epoxy resin completely covering the epoxy to excess. Allow for no resin bleed and continue broadcasting aggregate until resin is covered. Remove excess aggregate once the system has dried. Methods for removal of aggregate are: by broom, oil free compressed air or vacuum. Allow for a minimum of 3 hrs (depending on temperature) to open to traffic.

Aggregate requirements: #7 on the mosh scale or higher.

Bridge deck or heavy duty overlay system: approximately 2.5 lbs per sq. ft.

### Limitations

- ◆ Minimum material, surface and ambient temperature must be 45°F and rising
- ◆ Overlay system is a vapor barrier
- ◆ Do not thin with solvents
- ◆ Minimum age of concrete should be 28 days
- ◆ Material needs to be preconditioned to 65°F before application.

### Clean-up

Using appropriate safety methods and protective clothing, clean equipment, tools and uncured resin with xylene or toluene.

### Caution

#### **FOR INDUSTRIAL USE ONLY:**

Ipanol E-Flex Epoxy System components contain alkaline amines. These materials are strong sensitizers and may cause skin sensitization or allergic response ranging from a mild wheezing to a severe asthmatic type attack. Avoid contact with skin or eyes. In case of contact, immediately wash skin with soap and water. Flush eyes with water and obtain medical attention. Wear protective clothing, goggles for eyes and barrier cream on all exposed skin.

See MSDS for additional precautionary information and health hazard data

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### 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 guarantee 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, salesperson 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.

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