



IPA SYSTEMS

# IPANOL E-GROUT

High Performance Epoxy Grout



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## QUALITY PRODUCTS FOR THE CONCRETE /MASONRY REPAIR INDUSTRY

### Description

Ipanol E-Grout is a 3 component, 100% solids, high performance, high quality, engineered Precision epoxy grout. Available in standard set and extended depth set.

### Where to Use

Ipanol E-Grout can be utilized for precision seating of baseplates, grouting under equipment that requires a high strength grout to withstand heavy impact or vibratory loads. Grouting in anchors and under crane rails. Use in place of cementitious grouts where chemical resistance is needed.

### Advantages

- ◆ Made in America
- ◆ High Strength, with high impact resistance
- ◆ High effective bearing area
- ◆ Low exotherm cure for deep pour capability
- ◆ Oil and chemical resistance
- ◆ Excellent flowability
- ◆ Pre-measured units

### Packaging

0.5 cu. ft. (.014cu.m.)kit: 70lb/31.7kg :

Component A: 1 gal./3.8L can Component B: 1 gal./3.8L can  
Component C: (1) 60 ib./ 27 kg. bag ( Engineered aggregate)

2. cu. ft. (.056 cu. m.) kit: 280lb./127kg:

Component A: 5 gal./18.9L can Component B: 1 gal./3.8L can  
Component C: (4) 60 ib./ 27 kg. bag ( Engineered aggregate)

### Technical Data

		<u>E-Grout Standard</u>	<u>E-Grout Extended Depth</u>
<u>ASTM C-579 Compressive Strength @ 75°F</u>	8-hr	3,200 psi	1,200 psi
	16-hr	6,500 psi	3,300 psi
	1-day	11,000 psi	6,400 psi
	2-day	13,000 psi	9,300 psi
	3-day	15,000 psi	10,500 psi
	4-day	15,000 psi	11,800 psi
	5-day	15,000 psi	12,500 psi
	6-day	15,000 psi	12,500 psi
	7-day	15,000 psi	12,500 psi
	Five Bag Mix	7-day	16,000 psi
ASTM C-579	Compressive Modulus of Elasticity	2,200,00 psi	2,100,000 psi
ASTM C-1181	Compressive Creep (400 psi, 140°F)	<0.005 in/in	<0.005 in/in
ASTM C-307	Tensile Strength	2,500 psi	2,200 psi
ASTM C-307	Tensile Modulus of Elasticity	2,100,000 psi	2,000,000 psi
ASTM C-580	Flexural Strength	4,500 psi	4,100 psi
ASTM C-580	Modulus of Elasticity	2,200,000 psi	2,100,000 psi
ASTM C-882	Bond Strength	3,500 psi	3,300 psi
ASTM C-884	Thermal Compatibility	pass	pass
ASTM D-2471	Gel Time	180 minutes	300 minutes
ASTM D-2471	Peak Exothermic	110°F	90°F
ASTM C-531	Linear Shrinkage on cure	0.005%	0.005%
ASTM C-531	Coefficient of Thermal Expansion:		
	Standard	16 x 10 <sup>-6</sup> in/in; °F	18 x 10 <sup>-6</sup> in/in; °F
	>Five-bag max	14 x 10 <sup>-6</sup> in/in; °F	15 x 10 <sup>-6</sup> in/in; °F
Pour Depth at 75°F		Up to 12 inches	Up to 24 inches

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Curing temperatures	Working Time	Initial Cure Time	Working Time	Initial Cure Time
50°F /16°C	4 hours	42 hours	8 hours	84 hours
55°F /18°C	3 hours	36 hours	7 hours	72 hours
65°F /21°C	2 hours	30 hours	5 hours	60 hours
75°F /24°C	1.5 hours	24 hours	3.5 hours	48 hours
85°F /29°C	45 min	18 hours	2.5 hours	36 hours
95°F /35°C	30 min	12 hours	1.5 hours	24 hours
100°F /38°C	20 min	6 hours	1 hour4	12 hours

### Surface Prep

**Fresh concrete:** must be allowed to cure for a minimum of 28 days to allow for hydration and shrinkage prior to placement of Ipanol E-Grout. Please contact IPA's Technical Service before attempting to place this product on 'green' concrete. All surface contamination must be removed by mechanical means, creating a surface profile of expose sound aggregate that will provide a strong bond surface for the Ipanol E-Grout.

**Old Concrete:** Existing foundations should be checked for cracks and repaired. Contact IPA Systems Technical Service for a complete selection of injection resins and concrete repair materials for a single source repair.

**Metal surfaces:** All metal surfaces to come in contact with grout should be sandblasted to white metal finish and wiped clean with solvent. Items not intended to bond to grout, such as leveling screws, wedges, and bolts must be protected with wax, caulk, duct tape or similar.

**Form preparation:** Epoxy grouts require heavy duty forms. A sheet of 3/4" plywood and proper bracing should be used to hold the force of the weight of the grout (140 lbs/64kg per cu ft). Forms should be coated with a minimum of two coats of an industrial grade paste wax to facilitate removal of forms after cure. Forms should have 45° angle chamfer strips at all vertical corners and horizontal grout grade elevation in order to eliminate sharp corners. Caulk, putty, or similar sealant should be used to render the forms "watertight". Forms should be designed to allow for a hydraulic head to facilitate the placement of Ipanol E-Grout.

### Mixing

Ipanol E-Grout are shipped in pre-measured .5cu ft / .014m<sup>3</sup> unit or a 2 cu ft / .056m<sup>3</sup> unit. mix these products ONLY in complete units. DO NOT THIN or add any solvents prior to mixing.

**.5cu ft / .014m<sup>3</sup> kit:** Pour both liquid components into pail and mix thoroughly for 3 minutes with a *Jiffy* mixer on low-speed (300 rpm) until material is a uniform consistency. NOTE: Keep mixer at bottom of pail to avoid introducing air. After liquid components are mixed, slowly add component C-Aggregate. mix only until all aggregate is wetted out. Pour mixed grout into forms.

**2 cu ft / .056 m<sup>3</sup> kit:** Component A-Resin is packaged in a 5gal / 18.8L pail, component B-Hardener is packaged in a 1 gal / 3.8 L pail, component C-Aggregate is packaged in (4) 60 lb poly-lined bags. Pour component B-Hardener into 5 gal / 18.8L, pail containing component A-Resin. Mix material thoroughly for 3 minutes with a *Jiffy* mixer on a low-speed (300 rpm) drill motor until a uniform consistency is achieved. NOTE: Keep mixer at bottom of pail to avoid introducing air. Pour liquids into mortar mixer, making sure to remove all resins from sides and bottom of pail with spatula or similar tool. Introduce first bag of component C-aggregate prior to starting mixer. Start mixer and slowly add the remaining three bags of aggregate. Mix only until all aggregate is wetted out! DO NOT OVER mix.

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### Application

Ipanol E-Grout should be poured into forms at one location in order to allow a uni-directional flow. Use of a header box will ease the placement of the finished product. Strict adherence to temperature considerations will assist the placement properties. Check forms frequently for leaks. Plug leaks with a hydraulic cement or putty. Ipanol E-Grout will not self-seal.

**Finishing:** When forms are filled to desired elevation, exposed horizontal surfaces of Ipanol E-Grout may be finished with a surfactant such as Xylol or toluene and a paintbrush or small hand trowel. Surfactant should be lightly sprayed or misted on surface, DO NOT PUDDLE on surface. This process can be repeated every 30 minutes until surfaces are firm.

**Temperature Considerations: Important...** Epoxy resins are temperature sensitive and care should be taken to condition all components (including component "C" aggregate) to between 75°F – 90°F (24°C – 32°C) 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 grouting materials. Temperatures warmer than stated range decrease viscosity of resins, hasten the cure, and reduce the working time of the grout.

### Clean-up

Ipanol E-Grout is a low exotherm grout. The extended working time allows for easy soap & water clean up of tools mixers and work area while Ipanol E-Grout is in the plastic stage. For materials that have started to set, Xylol, or other approved solvent may be used.

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### Caution

#### Safety Considerations:

- Component A – Irritant
- Component B – Corrosive
- Product is a strong sensitizer. Use of safety goggles and chemical resistant gloves are recommended.
- Use of a NIOSH/mSHA organic vapor respirator is recommended if ventilation is inadequate.
- Avoid breathing vapors.
- 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. CURED EPOXY RESINS ARE INNOCUOUS.

#### FOR INDUSTRIAL USE ONLY:

See MSDS for additional precautionary information and health hazard data

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### Limitations

- ◆ Minimum material, surface and ambient temperature must be 50°F and rising
- ◆ Temperature will effect flow rate
- ◆ Do not thin with solvents
- ◆ Minimum age of concrete should be 28 days
- ◆ Material needs to be preconditioned to 75°F before application.

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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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