



IPA SYSTEMS

IPANOL LV

100% Solid Epoxy, High Modulus, Low Viscosity Injection Resin

IPA SYSTEMS

QUALITY PRODUCTS FOR THE CONCRETE /MASONRY REPAIR INDUSTRY

Description

IPANOL LV is a solvent-free, moisture insensitive, low viscosity, high strength, two component injection resin. It meets ASTM-C-881 Types I, II, IV & V, Grade 1, Classes B & C. It also meets USDA specifications for use in food processing areas. An excellent epoxy adhesive for use in crack grouting by pressure injection or gravity-feed and for making structural epoxy mortars and grouts.

Where to Use

IPANOL LV is used for pressure-injection of cracks in structural concrete, masonry, wood, etc. It can be gravity feed into cracks on horizontal concrete or masonry. Combine the resin with selected aggregates to make a structural mortar.

Advantages

- ◆ Made in America
- ◆ Structurally restores integrity of concrete
- ◆ Low viscosity
- ◆ Moisture Insensitive

Coverage Rate

1 gal/3.8 L of mixed epoxy yields 231 cu in / .0037 cu m of epoxy.
1 gal/3.8 L of mixed epoxy combined with 5 gal/18.9L of aggregate yields 808.5 cu in / .013 cu m of mortar.

Packaging

150ml x 300ml cartridges
3 gal/11.4L units
15 gal /56.8 L units

Technical Data

Type: Moisture Insensitive, 100% Solids, Hi-Mod, Low Viscosity
Mixing Ratio: Part A to Part B, 2 :1 by volume

Viscosity: 175 to 250 cps

Pot Life: Neat 20 to 30 minutes @ 75°F (23.9°C)

Bond Strength—Hardened concrete to hardened concrete

2 day dry cure	ASTM C 882	3000 psi (20.7 MPa)
14 day moist cure	ASTM C 882	2300 psi (15.9 MPa)

Tensile Strength, psi ASTM D 638 7000 psi (48.3 MPa) (14 days)

Tensile Elongation, % at break ASTM D 638 1.9%

Water Absorption, 24 hours ASTM D 570 0.5% max.

Compressive Strength ASTM D 695, psi (MPa)

	40°F (4.4°C)	75°F (23.9°C)	90°F (32.2°C)
16 hours		3,000 (20.7 MPa)	6,000 (41.4 MPa)
24 hours		5,000 (34.5 MPa)	8,000 (55.2 MPa)
3 Days	3,000 (20.7 MPa)	10,000 (69.0 MPa)	8,500 (58.6 MPa)
7 Days	8,000 (55.2 MPa)	11,500 (79.3 MPa)	10,400 (71.7 MPa)

IPA SYSTEMS, INC

P.O. Box 26869- 2745 North Amber Street, Philadelphia, PA 19134

Tel: 800-523-3834, Fax: 215-425-6234, E-mail: info@ipasystems.com, Web Site: www.ipasystems.com



IPA SYSTEMS



IPA SYSTEMS

QUALITY PRODUCTS FOR THE CONCRETE /MASONRY REPAIR INDUSTRY

Compressive modulus 3.5×10^5

Linear coefficient of shrinkage on cure ASTM D 2566 0.003 max.

Epoxy Mortar Properties:

Compressive Strength Mortar (1:5) - psi (MPa)

	40°F (4.4°C)	75°F (23.9°C)	90°F (32.2°C)
16 hours		5,000 (34.5 MPa)	5,800 (MPa)
24 hours		5,500 (MPa)	7,000 (MPa)
3 Days	5,000 (34.5 MPa)	6,800 (MPa)	7,500 (MPa)
7 Days	8,500 (58.6 MPa)	10,000 (69.0 MPa)	9,500 (MPa)

Compressive modulus 8.2×10^5

Tensile Strength, psi ASTM D 638 7000 psi (48.3 MPa) (14 days)

Tensile Elongation, % at break ASTM D 638 1.9%

Modulus of elasticity, psi 3.6×10^5

Tensile Strength, psi ASTM D 790 12,000 psi (MPa) (14 days)

Tangent modulus of elasticity in bending, psi 3.7×10^5

Surface Prep

All surfaces must be clean and free of dirt, dust, oil, grease, curing compound or any contaminants that would adversely affect the bond. Surfaces must be structurally sound. All loose particles or soft unsound sections must be removed. Surfaces may be dry or damp but must be free of standing water.

Application

TO PRESSURE INJECT CRACKS:

Flushing cracks is detrimental and should not usually be done. Use automatic injection equipment for 2:1 ratio epoxy that will absolutely stay on ratio while under pressure. Carefully set surface or counter sink ports on face of crack. Be sure the crack is open where ports are placed and not impacted with debris. Set the ports with Ipanol Anchoring Gel, being careful not to obstruct the crack with epoxy. If feasible, also seal the back side of crack with Ipanol Anchoring Gel as a cap sealing compound when used in this application. A successful and profitable injection job depends largely on carefully placing the cap seal and ports allowing the injection to proceed smoothly with no leaks. Allow the cap seal to fully cure. Cure time will depend on temperature. Inject Ipanol C, always starting at the lowest port. If the back side of the crack has been sealed, stay on a port as long as it is accepting epoxy. Cap adjoining ports as epoxy extrudes out of them staying on the original port until the pump stalls out or the crack is completely filled.

IPA SYSTEMS, INC

P.O. Box 26869- 2745 North Amber Street, Philadelphia, PA 19134

Tel: 800-523-3834, Fax: 215-425-6234, E-mail: info@ipasystems.com, Web Site: www.ipasystems.com



IPA SYSTEMS



IPA SYSTEMS

QUALITY PRODUCTS FOR THE CONCRETE /MASONRY REPAIR INDUSTRY

TO BIND MORTAR AND GROUT FOR PATCHING:

Premix entire unit of A and B or exact portions, 2 parts A to 1 part B by volume with low speed Jiffy mixer for 3 minutes. Hold back some neat resin for priming patch. Paint concrete to be patched with just enough neat resin to wet out the surface. Slowly add oven-dried aggregate (typically 4-5 parts of aggregate to 1 part epoxy) to the mixed epoxy while mixing with a slow speed Jiffy mixer being careful not to mix in air. Prepared mortar must be placed before primer becomes tack free. Epoxy mortar may be placed and leveled with trowels. Do not disturb patch until it is fully cured. Ultra-violet light will darken epoxy. Oven dried aggregate may be sprinkled to refusal on top of mortar to protect from UV. Brush off excess after epoxy has cured.

TO GRAVITYFEED CRACKS: Seal underside of slab prior to filling if cracks reflect through. Pour neat Ipanol LV into vie-notched crack. Continue placement until completely filled.

Limitations

- ◆ Minimum material, surface and ambient temperature must be 40°F and rising
- ◆ Minimum age of harden concrete for bonding should be 28 days.
- ◆ Do not thin with solvents
- ◆ Material needs to be preconditioned to 65°F before application.
- ◆ Do not seal slabs on grade. Ipanol LV is a vapor barrier in this application.
- ◆ Maximum epoxy mortar thickness is 1.5" / 3.8 cm per lift.

Clean-up

EQUIPMENT: Uncured material can be removed with a citrus cleaner or another 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.

Caution

FOR INDUSTRIAL USE ONLY:

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.

Refer to MSDS for more information

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.

IPA SYSTEMS, INC

P.O. Box 26869- 2745 North Amber Street, Philadelphia, PA 19134

Tel: 800-523-3834, Fax: 215-425-6234, E-mail: info@ipasystems.com, Web Site: www.ipasystems.com