

SUBSECTION 2.1 INJECTION RESIN



EVA-POX® LOW VISCOSITY INJECTION RESIN 5

PRODUCT DESCRIPTION:

EVA-POX® LOW VISCOSITY INJECTION RESIN No. 5 is a two component, 100% solids, non-shrink, moisture insensitive epoxy resin system. It is an ultra low viscosity material, ideal for use in epoxy metering equipment, such as the "58-P Pulse Force Injection Machine". Eva-Pox® L.V. Injection Resin No. 5 is formulated for the structural repair of hairline cracks and may be used at temperatures as low as 32°F (0°C) on frost free surfaces. Meets ASTM C-881 specifications Type I & IV, Grade 1, Class B & C, and AASHTO M-235.

BASIC USES:

- Structural repair of cracked concrete by pressure injection or grouting
- Monolithic restoration of delaminated concrete

ADVANTAGES:

- Ultra low viscosity
- Meets ASTM C-881 Type I & IV, Grade 1, Class B & C
- Meets AASHTO M-235
- Gains strength rapidly
- Moisture insensitive
- Displaces water
- Extreme penetration

SURFACE PREPARATION:

All surfaces must be clean and free of dirt, dust, oil, grease, or any contaminant that could adversely affect the bond. Surfaces must be structurally sound and can be dry or damp. Due to the many variables in bonding to damp surfaces, be certain to make a test application under the same conditions as in which the full scale work is to be done.

Old Concrete: All loose particles or soft, weak sections must be removed. Asphaltic or oil contaminants should be removed with detergents or other cleaning materials. Surfaces should be thoroughly flushed with plenty of clean water and then treated with a 15% to 20% solution of muriatic acid. Mix the acid with water, approximately 1 part of acid to 3 to 5 parts of water, as required. Follow Safety Precautions when using acids. Pour on the surface in an even manner and thoroughly scrub until bubbling ceases. Rinse with plenty of clean water and allow to dry. Neutralize acid salts by scrubbing the surface with ammonium hydroxide and rinse with plenty of clean water. If chemical means of cleaning does not properly prepare the surface, then other means of cleaning such as sandblasting, mechanical scarification and vacuuming should be utilized.

New Concrete: Do not apply curing compound. If curing compounds have been used, they must be removed.

MIXING PROCEDURE:

Primer, Impregnating Sealer, or Injection Resin: In a clean container, combine 2 parts of Component **A** with 1 part of Component **B**. Mix thoroughly for 2 to 3 minutes with a paddle on a slow speed drill (400 to 600 rpm). Mix only the amount that can be used within the working life of the products.

TECHNICAL DATA

Properties (uncured):

	Part A	Part B	Mixed
Color	Lt. Straw	Amber	Lt. Amber
Viscosity, (cps.)	450 - 500	40 - 60	170 - 180
Wgt./Gal., (lbs.)			
@77°F (25°C)	9.5 ±0.2	8.0 ±0.2	9.0 ±0.2
Percent Solids (%)	100	100	100
Mixing Ratio (by vol.)	2	1	2:1
Shelf Life	2 yrs	2 yrs	
Pot Life (200 gms) @77°F (25°C)			30 - 35 mins
Tack Free (thin film)			4 - 6 hrs
Full Chemical Cure			7 days

Physical Properties Of Cured Material:

Compressive Strength	ASTM D-695	11,700 psi.
Bond Strength/dry cure	ASTM C-882	3,000 psi.
Bond Strength/moist cure	ASTM C-882	2,200 psi
Tensile Strength	ASTM D-638	6,000 psi
Flexural Strength	ASTM D-790	5,400 psi
Shear Strength	ASTM D-732	4,300 psi

APPLICATION:

Pressure Injection: EVA-POX® LOW VISCOSITY INJECTION RESIN No. 5 can be injected into cracks down to 0.002 inches (.051mm) with pressures ranging from 40 to 300 psi. Inject through polyethylene ports, T's or copper tubing. Depending upon the depth of the slab, drill holes and place fittings every 6" to 24" along the length of the crack. (Consult e-poxy engineered materials, I.I.C. "Concrete Injection Guidelines".) Anchor the fittings and seal the crack surface with Eva-Pox® Quick Gel #24 or Eva-Pox® Epoxy Paste #22 for overhead work. Wherever possible, seal all surfaces of the crack. When dealing with hydrostatic pressure, Hydraulic cement should be used to control the water flow and seal the crack surface. An additional seal of Eva-Pox® #24 or #22 is recommended to ensure a strong positive seal. Allow the surface to cure.

Begin injecting the Eva-Pox® L.V. Injection Resin No. 5 at the lowest fitting or at one end of the crack on horizontal applications. Continue pumping until resin flows from the next fitting. Then seal the first fitting and move onto the next one using the same procedure along the length of the crack.

- See "Concrete Injection Guidelines" for more details.

Gravity: "Vee" out the cracks. Below and clean out thoroughly with oil-free compressor air. Fill the cracks with pre-mixed injection resin. It may be necessary to fill the bottom of larger cracks with a small amount of dry silica sand to form a mortar block. More than one application is usually required.

Impregnating Sealer or Primer: Due to the limited work life of this product, it is recommended to dump the material from the mixing container onto the surface and squeegee to a thin film and allow to penetrate. For priming, apply with a broom, brush, or short nap roller. If desired, broadcast a slight excess of fine granules into the wet epoxy to create a nonslip surface.

WARRANTY

Manufacturer WARRANTS that the product conforms to its chemical description and is reasonably fit for the purpose stated on its Technical Bulletin when used in accordance with its directions. Manufacturer makes NO OTHER WARRANTY either expressed or implied. Buyer assumes all risk in handling. For further Technical or Application Information, contact e-poxy.

e-poxy engineered materials, I.I.C.
10 Broadway / Albany, New York 12202
Toll Free: (888) 999-2463 Phone: (518) 463-3271 Fax: (518) 463-3276
<http://www.e-poxy.com> / e-mail: info@e-poxy.com

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COVERAGE:

<u>Impregnating Sealer:</u>	80 –150 sqft/gal or primer: depending upon porosity of surface
<u>Mortar:</u>	Varies with amount of aggregate
<u>Injection Resin:</u>	Varies according to job conditions
<u>Grouting:</u>	Varies with amount of aggregate

AVAILABILITY:

<u>Packaging:</u>	10 oz. Cartridges, 3 Gal. Units, 15 Gal. Units, 165 Gal. Units
<u>Color:</u>	Light Amber

CLEAN UP:

Use EVA-POX® SOLVENT No. 31

STORAGE:

Materials must be kept in a dry area at temperatures between 50°F and 95°F (10°C - 35°C) in the original unopened containers during all phases of delivery, storage and handling.

DO NOT ALLOW PRODUCT TO FREEZE

CAUTION:

Direct contact with the skin should be avoided as it can cause skin irritation. Protective clothing, goggles and gloves are recommended. In case of direct contact with the skin, wash with soap and water. In case of accidental contact with eyes, flush immediately with plenty of water and report to a doctor. Fatal if taken internally. Keep away from open flame.

KEEP OUT OF REACH OF CHILDREN

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10 Broadway / Albany, New York 12202
Toll Free: (888) 999-2463 Phone: (518) 463-3271 Fax: (518) 463-3276
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