



A GIBRALTAR INDUSTRIES COMPANY 

EPOXY INJECTION

For Concrete, Masonry and Wood



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PRODUCT DESCRIPTION.....

Two component structural, moisture insensitive epoxy.
Designed for ultra high strength and easy use.
CIA-Fluid LPL is designed to be used where a long pot life, low viscosity material is required.

GENERAL USES.....

CIA-Fluid LPL is ideally suited for a wide range of applications requiring strength and durability including:

- Bonding agent for plastic to hardened concrete.
- Spall repair.
- Gravity fill cracks in concrete.
- Pressure crack injection epoxy.
- General steel, wood, masonry adhesive.
- Base plate grout.

FEATURES.....

- Meets ASTM C881.
- High strength.
- Low odor, low toxicity, non-shrink formulation.
- Easy to use - No setting tools required.
- 100% solids.
- Medium viscosity.
- Moisture insensitive.
- Long working time.

SHELF LIFE.....

1 year (minimum) in properly stored, unopened containers. CIA-Fluid LPL is not sensitive to heat or UV light. Prevent from freezing.

MATERIAL STORAGE.....

Store material on pallets or shelves in a warehouse in temperatures above 60°F.

MIX RATIO.....

A Component : B Component = 1:1 by volume

VISCOSITY.....

Mixed 9,500 cps @ 77°F(25°C)

COLOR.....

A Component (Epoxy Resin)	Black Liquid
B Component (Amine Adduct)	White Liquid
Mixed	Gray Liquid

CURED PROPERTIES.....

Compressive Strength (ASTM D 695)	10,000 psi	7 days cure at room temperature.
Tensile Strength (ASTM D 638)	5,000 psi	7 days cure at room temperature.
Heat Deflection Temperature (ASTM D 648)	102°F	7 days cure at room temperature.
Modulus of Elasticity (ASTM D 695)	1.6 x 10 ⁵	

BOND STRENGTH.....

Slant/Shear Strength (ASTM C-882) 5,000 psi 7 days cure (epoxy) at room temperature.
All breaks in concrete, no failure on bond line.

WORKING TIME.....

60 gram mass at 77°F: 90 minutes
Thin film at 77° F: 3-4 hours

MIXING.....

Pre mix each component separately before combining. Mix complete pre-measured units or proportion equal volumes of each component into a clean pail. Mix with a low speed drill for 3 minutes with a Jiffy mixer. Do not use high speed. Mix only the quantity that can be used within the pot life.

APPLICATION.....

Product may be applied by brush, roller, broom, or sprayer. When used as a bonding agent, place wet concrete while epoxy is still tacky.

PACKAGING.....

2 gallon kits (1 gal A + 1 gal B)
10 gallon kits (5 gal A + 5 gal B)

CLEANING.....

Prior to curing, CIA-Fluid LPL may be removed from tools and equipment using xylene or lacquer thinners.

LIMITATIONS.....

Not recommended where non-sag material is required.

PRECAUTIONS.....

Read warning on cartridge and refer to Material Safety Data Sheet prior to use.

WARRANTY.....

United Steel Products Company warrants its products to be free from defects in material and workmanship. Said products are further warranted as to adequacy of design, provided products are used in strict accordance with United Steel Products Company's current published design limits and are installed in a workmanlike manner. (Said warranties do not apply in the event products are cut, notched, welded, drilled or in any way altered). No warranty applies if deterioration occurs due to environmental conditions. United Steel Products Company's obligations under this warranty shall be limited to the replacement or repair of those products demonstrated to be defective. Such remedy shall constitute Customer's sole and exclusive remedy and Customer hereby agrees that no other remedy (including, but not limited to claims for INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES, OR ANY CAUSE, LOSS, ACTION, CLAIM OR DAMAGE, INCLUDING LOSS OF TIME, WHATSOEVER, OR INJURY TO PERSON OR PROPERTY OR ANY OTHER CONSEQUENTIAL DAMAGE OR INCIDENTAL OR ECONOMIC LOSS) shall be available to Customer whether said claims be asserted on the basis of warranty, negligence, strict liability or otherwise. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ALL SUCH OTHER WARRANTIES BEING HEREBY EXPRESSLY EXCLUDED.

PRODUCT DESCRIPTION.....

Two component, moisture insensitive epoxy.
Designed for ultra high strength and easy use.
CIA-Fluid is designed to be used where self setting material is required.

GENERAL USES.....

CIA-Fluid is ideally suited for a wide range of applications requiring strength and durability including:

- Anchoring threaded rod or rebar into concrete.
- Fills cracks in concrete.
- Support brackets for rail projects.
- Anchoring for DOT projects.
- Anchoring vibrating equipment
- Crack Injection Epoxy
- Bearing plates.

FEATURES.....

- Meets ASTM C881.
- Reliable: nozzle mixes two components completely.
- Low odor, low toxicity, non-shrink., formulation.
- Easy to use; no setting tools required.
- Clean – no contact with adhesive required.
- 100% solids.
- High strength.
- Moisture insensitive.
- Long working time in mixing nozzle.

MATERIAL STORAGE.....

Store material on pallets or shelves in a warehouse in temperatures above 60°F.

SHELF LIFE.....

1 year (minimum) in properly stored, unopened containers. CIA-Fluid is not sensitive to heat or UV light. Prevent from freezing.

VISCOSITY.....

A Component (Resin)	13,000 cps. @ 77°F (25°C)
B Component (Hardener)	20,500 cps. @ 77°F (25°C)
Mixed	51,000 cps.

COLOR.....

A Component (Resin)	Black liquid
B Component (Hardener)	White liquid
Mixed	Gray liquid

CURED PROPERTIES.....

Compressive Strength (ASTM D 695)	18,530 psi	7 days cure at room temperature.
Tensile Strength (ASTM D 638)	5,230 psi	7 days cure at room temperature.
Tensile Elongation (ASTM D 229)	0.14 %	
Heat Deflection Temperature (ASTM D 648)	128°F	7 days cure at room temperature.
Modulus of Elasticity (ASTM D 695)	1.0 x 10 ⁶	

BOND STRENGTH.....

Slant/Shear Strength (ASTM C-882) 5,000 psi 7 days cure (epoxy) at room temperature.
All breaks in concrete, no failure on bond line.

Substrate	Bolt-Up Time*	Min. Cure**
40-50°	12 hrs	96 hrs
51-60°	8 hrs	72 hrs
61-70°	6 hrs	48 hrs
71-80°	4 hrs	36 hrs

*Bolt-up time is time required before anchor may be disturbed or hardware may be installed.

**Minimum cure time is time required for anchors to achieve full strength.

GRADE 60 REINFORCING BAR IN CONCRETE						
CIA-FLUID EPOXY						
Stud Dia. (in.)	Hole Dia. (in.)	Min. Embed. (in.)	Spacing (in.)	Edge Dist. (in.)	2000 psi. Concrete	
					Tension (lbs.)	Shear (lbs.)
#4	5/8	4-1/2	6-3/4	4-1/2	14,962	9,126
#6	1	6-3/4	10-1/4	6-3/4	19,151	18,728
#8	1-1/4	9	13-1/2	9	35,088	27,472

THREADED ROD IN CONCRETE						
CIA-FLUID EPOXY						
Stud Dia. (in.)	Hole Dia. (in.)	Min. Embed. (in.)	Spacing (in.)	Edge Dist. (in.)	2000 psi. Concrete	
					Tension (lbs.)	Shear (lbs.)
3/8	1/2	3-3/8	4-1/2	3-3/8	7,316	5,887
1/2	5/8	4-1/2	6	4-1/2	12,477	8,059
5/8	3/4	5-5/8	7-1/2	5-5/8	20,042	13,210
3/4	7/8	6-3/4	9	6-3/4	26,485	20,150

CLEANING.....

Prior to curing, CIA-Fluid may be removed from tools and equipment using xylene or lacquer thinners.

LIMITATIONS.....

Not recommended where non-sag material is required.

PRECAUTIONS.....

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