

## CI-GV Gel-Viscosity Injection Epoxy

CI-GV structural injection epoxy gel is a two-component, high-modulus, high-solids, moisture-tolerant, thixotropic epoxy designed for pressure injection of concrete cracks. CI-GV is suitable for vertical and horizontal crack sealing and general concrete repair applications when substrate temperatures are between 40°F (4°C) to 90°F (32°C). Available in 3-gallon bulk kits or convenient side-by-side cartridges dispensed through a static mixing nozzle using either a manual or pneumatic dispensing tool.

### Features

- Chemically bonds with the concrete to provide a structural repair. CI-GV seals the crack from moisture, protecting rebar in the concrete from corrosion.
- Gel-viscosity moisture-tolerant, can be used on dry and damp surfaces.
- Formulated for maximum penetration under pressure.
- Non-shrink and resistant to oils, salts and mild chemicals.
- Can be used with metered pressure-injection equipment.
- Freeze-thaw resistant.

### Applications

- Pressure injection
- Underwater pressure injection
- Repair mortar
- Bonding agent
- Pick proof sealant

### Product Information

Mix Ratio/Type	2:1
Mixed Color	Concrete gray
Crack Width	0.094"-0.25" (2.4 mm-6 mm)
Shelf Life	24 months
Storage Temperature	45°F (7°C)-90°F (32°C)
Base Material Temperature	40°F (4°C)-90°F (32°C)
Volatile Organic Compound (VOC)	10 g/L mixed
Yield	231 in. <sup>3</sup> /US gal. (0.001 m <sup>3</sup> /L)
Pot Life, 1 Quart	8 minutes at 90°F (32°C) 19 minutes at 72°F (22°C) 55 minutes at 50°F (10°C)
Thin Film (5 mil)	Set to touch: 3 hr.
Set Time at 72°F, ASTM D5895	Dry through: 6 hr.

Manufactured in the US using global materials

### Code Reports, Standards and Compliance

ASTM C881 and AASHTO M235 Type I/II/V; Grade 3; Class B  
Type I/IV and II/V, Grade 3; Class C

### Installation Instructions

Installation instructions are located at the following locations: pp. 210-215, product packaging or on the CI-GV Technical Data Sheet at [strongtie.com/rps](http://strongtie.com/rps).

### Accessories

See p. 209 for information on crack repair accessories.

### CI-GV Packaging Information

Model No.	Capacity (ounces)	Packaging Type	Package Quantity	Carton Quantity	Dispensing Tools	Mixing Nozzle
CIGV32	32	Side-by-side cartridge	1	5	ADT30S, ADT30P	EMN022 (included)
CIGV3KT	384	3-gallon bulk kit	1 case of (3) gallon cans	—	Metering pumps offered by third-party manufacturers	—

1. Cartridge estimation guidelines are available at [strongtie.com/apps](http://strongtie.com/apps).



CI-GV

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## Technical Information

### Compressive Strength

Cure Time	40°F (4°C) psi (MPa)	60°F (16°C) psi (MPa)	72°F (22°C) psi (MPa)	90°F (32°C) psi (MPa)	Test Standard
4-hour cure	—	—	—	9,150 (63.1)	ASTM D695
8-hour cure	—	—	5,150 (35.5)	9,800 (67.6)	
16-hour cure	—	3,100 (21.4)	9,300 (64.1)	10,200 (70.3)	
24-hour cure	—	6,800 (46.9)	10,250 (70.7)	10,250 (70.7)	
3-day cure	5,400 (37.2)	10,500 (72.4)	11,250 (77.6)	10,250 (70.7)	
7-day cure	8,000 (55.2)	11,700 (80.7)	11,600 (80.0)	10,400 (71.7)	
14-day cure	8,750 (60.3)	12,150 (83.8)	11,600 (80.0)	10,600 (73.1)	
28-day cure	11,100 (76.5)	12,400 (85.5)	11,700 (80.7)	10,800 (74.5)	

Temperature Range	Class B 40°–60°F (4°C–16°C)	Class C >60°F (16°C)	Test Standard
Epoxy Classification	Types I, II, V; Grade 3	Types I, II, IV, V; Grade 3	ASTM C881
Gel Time — 60 gram mass <sup>1</sup>	200 minutes	30 minutes	ASTM C881
Bond Strength, Slant Shear: Hardened to Hardened Concrete — 2-day cure <sup>2</sup> Hardened to Hardened Concrete — 14-day cure <sup>2</sup> Fresh to Hardened Concrete — 14-day cure <sup>3</sup>	1,250 psi (8.6 MPa) 3,650 psi (25.2 MPa) 3,130 psi (21.6 MPa)	3,050 psi (21.0 MPa) 3,850 psi (26.5 MPa) 3,130 psi (21.6 MPa)	ASTM C882
Flexural Strength — 7-day cure <sup>2</sup>	4,400 psi (30.3 MPa)	10,150 psi (70.0 MPa)	ASTM D790
Modulus of Elasticity in Compression — 7-day cure <sup>2</sup>	389,000 psi (2,680 MPa)	454,000 psi (3,130 MPa)	ASTM D695
Heat Deflection Temperature — 7-day cure <sup>3</sup>	124°F (51°C)		ASTM D648
Glass Transition Temperature — 7-day cure <sup>3</sup>	136°F (58°C)		ASTM E1356
Water Absorption — 14-day cure <sup>4</sup>	0.31%		ASTM D570
Linear Coefficient of Shrinkage <sup>3</sup>	0.001		ASTM D2566
Coefficient of Thermal Expansion <sup>3</sup>	2.32 x 10 <sup>-5</sup> in./in.°F 4.18 x 10 <sup>-5</sup> cm/cm°C		ASTM C531
Shore D Hardness — 24-hour cure <sup>3</sup>	74		ASTM D2240
Shore D Hardness — 7-day cure <sup>3</sup>	80		ASTM D2240
Adhesion to Concrete — 24-hour cure <sup>3</sup>	1,100 psi (7.6 MPa)		ASTM D7234

1. Class B tested at 50°F (10°C), Class C tested at 72°F (22°C).

2. Class B cured at 40°F (4°C), Class C cured at 60°F (16°C).

3. Cured at 72°F (22°C).

4. Cured at 72°F (22°C), immersed in water 24 hours.

## Technical Information — When Used As a Mortar

Tests performed at 1 part by volume of mixed CI-GV to 1 part by volume of oven-dried sand.

Pot life: 30 minutes at 72°F (22°C).

### Compressive Strength

Cure Time	40°F (4°C) psi (MPa)	60°F (16°C) psi (MPa)	72°F (22°C) psi (MPa)	Test Standard
1-day cure	—	8,000 (55.2)	9,200 (63.4)	ASTM C579
7-day cure	8,600 (59.3)	9,500 (65.5)	10,200 (70.3)	
28-day cure	9,450 (65.2)	9,600 (66.2)	10,450 (72.0)	

Temperature Range	72°F (22°C) psi (MPa)	Test Standard
Flexural Strength — 7-day cure	4,050 (27.9)	ASTM C580
Tensile Strength — 7-day cure	2,000 (13.8)	ASTM C307
Bond Strength, Slant Shear: Hardened to Fresh Mortar — 7-day cure	1,800 (12.4)	ASTM C882