

# EPOXY-GEL Fast

## Two-Component, Fast Setting, High Strength, Low Sag, Epoxy Resin Adhesive

### CSI Div. 03 + 07

- 03 01 30 Maintenance of Cast-in-Place Concrete
- 03 01 50 Maintenance of Cast Decks and Underlayments
- 03 30 00 Cast-In Place Concrete
- 03 64 00 Injection Grouting
- 07 18 00 Traffic Coatings
- 07 01 50.61 Roof Re-Coating
- 07 14 16 Cold Fluid Applied Waterproofing

### Product Description:

EPOXY-GEL Fast is a two-component, fast setting, high strength, low sag, epoxy resin adhesive with a gel consistency allowing for easy placement in horizontal, and vertical applications.

### Typical Applications:

- Structural bonding
- Repairing cracks and patching concrete
- Chemical anchoring of dowels, anchoring bolts, and reinforcing steel
- Adhering seal strips prior to coating applications
- Setting injection ports prior to epoxy injection grouting

### Advantages:

- Fast set time
- Adheres well to damp concrete
- Cures to form an exceptionally strong bond
- Non-sag when applied up to 1/4" (6mm) thick
- Zero VOCs

### Complies With:

- ASTM C881 (Type I, II, IV and V, Grade 3, Class B and C)
- AASHTO M235 (Type I, II, IV and V, Grade 3, Class B and Class C)
- ACI 548.15-20 Specification for Crack Repair by Epoxy Injection
- ACI 548.12-12 Specification for Bonding Hardened Concrete and Steel to Hardened Concrete

### Substrate Preparation:

- All surfaces must be free from loose sand, dirt, dust, oil, grease, sealers, paint, existing coatings, and other foreign substances that could interfere with adhesion. Surfaces can be dry or damp, but must be free of standing water.
  - **Patching, bonding, and adhering to concrete:** Mechanically prepare all concrete surfaces to a concrete surface profile (CSP) of 3 - 5 per the International Concrete Repair Institute (ICRI) Guideline No. 310-2R-2013.
  - **Cracks:** Flush cracks clean using an appropriate cleaning solution and rinse well. Use clean, oil free, compressed air to blow out any remaining dust, water, or debris prior to installation.
  - **Drilled Holes:** Clean drilled holes with a cylindrical bristle brush. Use clean, oil-free, compressed air to remove all dust water, and debris prior to installation. Blow out holes from the bottom up.

Physical and Technical Data	
Mixing Ratio:	1 Part-A:1 Part-B
Gel Time, (ASTM C881) @ 105°F (41°C): @ 75°F (24°C): @ 50°F (10°C):	5 minutes 20 minutes 30 minutes
Viscosity, (ASTM D2393) @ 73°F (23°C):	6700 cps
Compressive Yield Strength, (ASTM D695) @ 60°F (16°C):	12,650 psi (87.2 MPa)
Compressive Modulus, (ASTM D695) @ 60°F (16°C):	580,000 psi (3999 MPa)
Flexural Strength, (ASTM D790) @ 73°F (23°C) for 7 days:	10,000 psi (68.9 MPa)
Flexural Modulus, (ASTM D790) @ 73°F (23°C) for 7 days:	420,000 psi (2896 MPa)
Tensile Strength, (ASTM D638) @ 73°F (23°C) for 7 days:	6,900 psi (47.6 MPa)
Tensile Elongation, (ASTM D638) @ 73°F (23°C) for 7 days:	2.5%
Bond Strength (ASTM C882) 2 day cure @ 60°F (16°C): 14 day cure @ 60°F (16°C):	1030 psi (7.10 MPa) 2100 psi (14.5 MPa)
Bond Strength to Concrete, (ASTM C1583) @ 73°F (23°C) for 7 days:	400 psi (2.76 MPa)
Water Absorption, 14 Days (ASTM C570) @ 73°F (23°C) for 7 days:	0.2%
Color:	Blue-Gray
VOC Content:	0 g/L
All data are averages of several tests under laboratory conditions. In practice climatic variations such as temperature, humidity, and porosity of substrate may affect these values.	

### Mixing:

**Cartridge:** Remove the protective cap from the adhesive cartridge and insert the cartridge into the recommended dispensing tool. Before attaching the mixing nozzle, balance the cartridge by dispensing a small amount

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of material until both components are flowing evenly. Screw the provided mixing nozzle on to the cartridge (do not modify mixing nozzle). Confirm that internal mixing element is in place prior to dispensing adhesive. Begin squeezing a small amount of material from the mixing nozzle onto a disposable surface until the material extruded is a smooth uniform blue-gray color with no streaks. Material with an off color or streaking is not properly mixed and will not set properly or perform as expected. Do not use this part for application. Once the proper mixture is achieved, discard the material that was initially extruded from the nozzle per federal, state, and local regulations, then begin application.

**NOTE:** Always establish a uniform non-streak color before use to verify proper mixing. If dispensing is interrupted, recheck the extruded EPOXY-GEL FAST for uniform streak-free color before continuing use. If working time has been exceeded, replace the mixing nozzle and repeat the mixing steps above.

## Application:

**IMPORTANT!** Epoxy resins are temperature sensitive and care should be taken to condition all components to between 70°F to 90°F (21°C to 32°C) prior to placement. Temperatures colder than stated range increase viscosity of resins and inhibit mixing and flow of materials. Temperatures warmer than stated range decrease viscosity of resins, hasten the cure and reduce the working time. Curing at less than ideal temperatures, <50°F or >105°F (<10°C or > 40°C), will require special considerations.

- **Structural Adhesive:**
  - For use as a structural adhesive, apply the material neat and work into substrate. The glue line should not exceed 1/8 inch. (3.18 mm).
- **Bonding & Coating:**
  - When bonding concrete to concrete, use a brush, or roller to apply an even coat of mixed EPOXY-GEL Fast to both concrete surfaces, making sure to fill all gaps. When bonding fresh concrete to hardened concrete, placement of fresh concrete must be done while EPOXY-GEL Fast is still tacky. If EPOXY-GEL Fast hardens prior to concrete placement, epoxy surface will need to be roughened and new EPOXY-GEL Fast will need to be placed.
- **Repairing Cracks:**
  - Dispense EPOXY-GEL Fast into the crack and remove excess before it sets.
- **Patching Mortar (Interior Repairs):**
  - To produce a patching mortar for interior repairs, mix 1 to 1-1/2 parts by volume of clean, dry, well graded silica sand to 1 part by volume of mixed EPOXY-GEL Fast. Place the mortar, working it into the concrete substrate and finish smooth. Each mortar lift should not exceed 1 inch. (2.54 cm).
- **Chemical Anchoring Dowels, Bolts and Reinforcement:**
  - When used as a chemical anchor, the annular space around the bolt in the hole should not exceed 1/8 inch. (3.17 mm). Place the mixing nozzle at the bottom of the hole and begin dispensing from bottom to top, using constant and even pressure until the hole is approximately 2/3 full. Be careful not to withdraw the nozzle too quickly, as this may trap unwanted air in the adhesive. Check the anchor element to make sure it is straight, clean, free of oil and dirt, and the necessary embedment depth is marked. Place the anchor element into the back of the hole, rotating the rod slowly (1-2 rotations) prior to reaching bottom to displace EPOXY-GEL Fast as it is inserted.

## Clean-up:

**EQUIPMENT:** Uncured material can be removed with 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.

## Limitations:

- Do not thin with solvents.
- For anchoring applications, concrete should be a minimum of 21 days old before anchor installation.
- Always test a small amount to ensure that the product is correctly mixed when dispensed from the cartridge. Ensure that the material hardens properly before proceeding with the application.
- Per NTSB Safety Recommendations, the use of adhesive anchors is prohibited in sustained overhead load anchoring applications.
- Substrate temperatures should be a minimum of 50°F (10°C).
- For applications with constant high temperature [above 105°F (41°C)], contact Aquafin Technical Department.
- Do not expose stored product to cold or freezing temperature [below 40°F (4°C)] for any length of time.
- Consult Aquafin Technical Department when mixing or placing outside of the temperature recommendations listed.

## Note:

Proper application is the sole responsibility of the user. Applicators are expected to follow ICRI and ACI guidelines as well as other applicable industry standards. Aquafin personnel or representatives are not site inspectors or construction project managers and therefore do not approve surface preparation, mixing, or application of Aquafin products. Site visits by Aquafin personnel or representatives are solely for the purpose of making technical recommendations, not for providing supervision or quality control.

## General Information:

All details in particular to the suggestions for the processing and use of the product is based on our present knowledge and experiences at the time of printing. Depending on specific applications, in particular regarding substrates, processing and environmental conditions may affect final results.

## Packaging:

- 22 oz. cartridge  
net fill 20 oz (600 ml)  
side by side cartridge (1:1 mix ratio)  
12 cartridges per case

## Shelf Life and Storage:

**Shelf Life:** 3 years in original unopened container

**Storage:** 50°F to 90°F (16°C to 32°C) in dry and dark conditions

## Safety:

Refer to SDS. For commercial use only. Avoid contact with skin and eyes. Wear rubber gloves and safety goggles during mixing and application. After contact with skin, wash with plenty of water. In case of eye contact, rinse immediately with plenty of water for 15 minutes and seek medical advice. **KEEP OUT OF REACH OF CHILDREN.**

**LIMITED WARRANTY:** AQUAFIN, INC. warrants this product for a period of one year from the date of installation to be manufactured free of defects and to be consistent with its technical properties as stated in our current Technical Data Sheet. This product must be used as directed and within its stated shelf life. AQUAFIN INC. will replace or at our discretion refund the purchase price of any product, excluding cost of labor, which is proven to be defective. Our product recommendations are based on industry standards and testing procedures. It is the buyer's obligation to test the suitability of

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the product for an intended use prior to using it. We assume no warranties written, expressed or implied as to any specific methods of application or use of the product. We do not guarantee compatibility of Aquafin products with other brands. For this reason, we strongly recommend application of a sample area at the jobsite to help determine suitability with other products. AQUAFIN INC. MAKES NO WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED. AQUAFIN, INC. shall not be liable for damages of any sort including remote or consequential damages, down time, or delay. Any claim for a defective product must be filed within 30 days of discovery of a problem, and must be submitted with written proof of purchase.

## For Professional Use Only.

<b>EPOXY-GEL Fast Coverage Chart</b>			
<b>Rebar Size</b>	<b>Hole Diameter</b>	<b>Hole Depth</b>	<b>Number of Anchors Per Cartridge</b>
3/8"	7/16"	3"	121
3/8"	7/16"	6"	60
1/2"	9/16"	5"	51
1/2"	9/16"	8"	32
5/8"	3/4"	6"	21
5/8"	3/4"	9"	14
3/4"	7/8"	7"	15
3/4"	7/8"	11"	9
1"	1-1/8"	9"	8
1"	1-1/8"	13"	5

Note: Coverage is approximate and will vary depending on jobsite conditions and application technique.