

# EPOXY-Gel

## Two-Component, High Strength, Non-Sag, Epoxy Resin Adhesive

### CSI Div. 03 + 07

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 is a two-component, high strength, non-sag, epoxy resin adhesive with a thick 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:

- Thick non-sag formula
- Adheres well to damp concrete
- Cures to form an exceptionally strong bond
- Zero VOC's

### Complies With:

- ASTM C881 (Type IV, Grade 3, Class C)

### 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. 301-2R-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.

### Mixing:

- **BULK:** The volume mixing ratio is 1 part component A to 1 Part component B (1A:1B). Carefully mix each part individually and then accurately measure out equal volumes of component A and component B before combining together. Mix for 3 minutes using a low speed drill with a jiffy

Physical and Technical Data	
Mixing Ratio	1 Part-A:1 Part-B
Gel Time, (ASTM C881) @ 105°F (40.5°C) @ 73°F (22.7°C) @ 50°F (10°C)	30 min 1 hr, 24 min 4 hrs, 24 min
Cure Time, (AASHTO T-237) @ 105°F (40.5°C) @ 73°F (22.7°C) @ 50°F (10°C)	3 days 7 days 14 days
Viscosity, (ASTM D2393) @ 73°F (22.7°C)	6700 cps
Compressive Yield Strength, (ASTM D695)	10,000 psi (68.9 MPa)
Compressive Modulus, (ASTM D695)	350,000 psi (2413 MPa)
Flexural Strength, (ASTM D790)	10,500 psi (72.39 MPa)
Flexural Modulus, (ASTM D790)	450,000 psi (3102 MPa)
Bond Strength (ASTM C882) 2 day cure 14 day cure	1000 psi (6.89 MPa) 1500 psi (10.34 MPa)
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 blade or paddle. For best results, mix at slow speeds (300 - 500 rpm) to prevent entraining air, and continue until a homogeneous mixture is achieved. Do not mix in an up and down motion.

### Installation:

#### 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. (3.17 mm).

#### Bonding & Coating

- When bonding concrete to concrete, use a brush, or roller to apply an even coat of mixed EPOXY-Gel 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 is still tacky. If EPOXY-Gel hardens prior to concrete placement, epoxy surface will need to be roughened and new EPOXY-Gel mixed and placed.

# EPOXY-Gel

---

## Repairing Cracks:

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

## 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 mixed thoroughly and that the material will harden properly before proceeding.
- 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 (40.5°C)], contact Aquafin Technical Department.
- Do not expose stored product to cold or freezing temperature [below 50°F (10°C)] for any length of time.
- Do not mix more than can be used in 30 mins [based on 75°F (24°C)].
- Consult Aquafin Technical Department when mixing or placing outside of the temperature recommendations listed.

## Note:

Proper application is the responsibility of the user. Field visits by AQUAFIN personnel are for the purpose of making technical recommendations and not for supervising or providing quality control on-site.

## Packaging:

- 2-gallon unit (7.57 L)  
Component A: (1) 1-gallon can (3.78 L)  
Component B: (1) 1-gallon can (3.78 L)
- 10-gallon unit (37.8 L)  
Component A: (1) 5-gallon pail (18.9 L)  
Component B: (1) 5-gallon pail (18.9 L)

## Storage and Shelf Life:

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

**Storage:** 60°F to 90°F (15.5°C to 32°C) in dry and dark conditions

**Temperature Considerations:** 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 mixing and 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. Mixing and curing at less than ideal temperatures, <50°F or >105°F (<10°C or >40.5°C), will require special considerations.

## 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 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. 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.