



AV-502-HV INJECTABLE BONDING EPOXY HV™

HIGH-STRENGTH INJECTION EPOXY RESIN

DESCRIPTION

AV-502-HV Injectible Bonding Epoxy HV™ is a high viscosity epoxy, unique formula developed for structural concrete repair by crack injection, gravity feed or patching. It can be used as a liquid binder for sand, aggregate or any other mineral filler to patch or resurface damaged concrete slabs. This material may be used to repair masonry, wood, and other rigid construction materials. **AV-502-HV** is 100% solids, VOC free and Butyl Glycidyl Ether (BGE)* free.

AV-502-HV meets or exceeds requirements of ASTM C 881 or AASHTO M-235 (Types I, Grade 2, Class C).

APPLICATION

- Binder for aggregates to patch or resurface damaged concrete slabs
- Repair of masonry, wood and concrete structures

FEATURES AND BENEFITS

- Non-shrink
- User friendly mix ratio of 4:1 by volume
- Butyl Glycidyl Ether (BGE)*free
- Long working time
- High viscosity
- Excellent adhesion
- High hardness
- ASTM C 881 compliant

INJECTION TECHNIQUES

- Gravity feed
- Crack Injection with dual cartridges or two-component injection pump

HOW IT WORKS

AV-502-HV has a user-friendly mixing ratio (4:1 by volume) which allows its application by dual cartridges or automatic injection equipment. Surface seal with Avanti's non-corrosive **AV-522 Crack Sealing Paste™** for manual or automatic injection.

PACKAGING

3-Gallon Kit

Resin (Part A) 31.8 lbs. in 3.5-gallon container
 Hardener (Part B) 4.8 lbs. in 1-gallon container

*Packaging size does not mean fill volume

SHIPPING

- Motor Class 85
- Resin: Not Regulated
- Hardener: Not Regulated
- Air freight available

CLEANING PRODUCTS

- **AV-208** Technical Grade Acetone™ (CAS# 67-64-1) – removes uncured resin from equipment
- **AV-222** Cleaner™ (Proprietary Blend) – removes cured resin from equipment

STORAGE

Store between 60°F – 80°F (15°C – 27°C) in a dry atmosphere. Keep containers closed. Temperatures below 60°F (16°C) may cause partial crystallization of the resin. If crystallization has occurred, heat the resin in its original container placing it into another container with hot water.

SAFETY

Always use OSHA-approved personal protective equipment (PPE). Refer to the SDS for complete safety precautions. The SDS is available by request or via download at avantigrout.com.

*BGE (Butyl Glycidyl Ether). The EPA (SARA Title III, section 312) lists BGE as "Toxic" (per ANSI Z129.1) by skin absorption and an immediate health hazard.

PROPERTIES*

AV-502-HV UNCURED Resin and Hardener

Appearance:	Clear
Mixed Viscosity:	7,800 cP @ 68°F (20°C)
Flash Point:	Resin: >302°F (>150°C) Hardener: >212 °F (>100 °C) CC
Solids:	100%
Specific Gravity (mixed):	1.47 @ 72°F (22°C)
Density:	12.3 lbs./gal 1,470 kg/m ³
Working Time (100 g)	45 minutes
Gel Time (100 g)	53 minutes

AV-502-HV CURED

Tensile Strength:	39.3 MPa (5,700 psi) – ASTM D638
Elongation @ break:	2.1% - ASTM D638
Compressive Strength:	91.7 MPa (13,300 psi) – ASTM D695
Adhesion to concrete	5.5 MPa (>800 psi) 100% failure in concrete
Hardness Shore D	93 – ASTM D2240
Water Absorption	0.17% - ASTM D570
Flexural Strength	68.9 MPa (10,000 psi) – ASTM D790

*Laboratory Results

SURFACE PREPARATION

To achieve excellent adhesion, the substrate should be free of all loose and foreign material and should be clean. Oils, grease, waxes or other contaminants must be removed prior to application. Be sure the crack is open where ports are placed. Set ports with Avanti's non-corrosive **AV-522 Crack Sealing Paste**.

MIXING PROCEDURE

For best performance, the ideal application temperature range is between 70-80°F (21-32°C) but can be extended between 55-90°F (13-32°C). Mix four parts resin (Part A) to one part hardener (Part B) for three minutes using a Jiffy Mixer and a slow speed drill. Mix at slow speed (less than 500 rpm) to avoid air entrainment. DO NOT mix more material than can be used within the stated working time. REMEMBER - you will have less working time at higher temperatures.

AV-502-HV and AV-522 may be removed from tools with Avanti's AV-208 Technical Grade Acetone™ or warm soapy water before they are fully cured.

NOTICE

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