



AVANTI

Stop leaks. Stabilize soil.
Control groundwater. **Permanently.**

Rev 08.2019

TECHNICAL DATA SHEET

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 2-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 2.4 gallons in 3.5 gallon pail

Hardener 0.6 gallons in 1 gallon container

SHIPPING

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

CLEANING PRODUCTS

- **AV-544** Epoxy Tool Cleaner™ (Proprietary Blend) – removes uncured and cured resin from equipment
- **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:	7800 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

*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 4 parts A (resin) to 1 part B (hardener) for 3 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 Crack Sealing Paste** may be removed from tools with Avanti's **AV-544 Epoxy Tool Cleaner** or warm soapy water before they are fully cured.

NOTICE

The data, information and statements contained herein are believed to be reliable, but are not construed as a warranty or representation for which Avanti International assumes any legal responsibility. Since field conditions vary widely, users must undertake sufficient verification and testing to determine the suitability of any product or process mentioned in this or any other written material from Avanti for their own particular use. NO WARRANTY OF SUITABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS MADE. In no case shall Avanti International be liable for consequential, special, or indirect damages resulting from the use or handling of this product.



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