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

TECHNICAL DATA SHEET

AV-502-LV Injectable Bonding Epoxy LV™

High-Strength Injection Epoxy Resin and Hardener

Description

AV-502-LV Injectable Bonding Epoxy LV™ is a low 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-LV is 100% solids, VOC free, and Butyl Glycidyl Ether (BGE)* free.

AV-502-LV meets or exceeds requirements of ASTM C881 and AASHTO M 235 (Types I, II, IV, V, Grade 1, Class C).

Applications

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

Features & Benefits

- Non-shrink
- User friendly mix ratio of 2:1 by volume
- Butyl Glycidyl Ether (BGE)* free
- Long working time
- Low viscosity
- Excellent adhesion
- High hardness
- ASTM C881 and AASHTO M 235 (Types I, II, IV and V, Grade 1, Class C) compliant
- Multiple grouting techniques including gravity feed and crack injection with dual cartridge or two-component injection pump

Required Products

- AV-502-LV Injectable Bonding Epoxy LV™ Resin (Part A)
- AV-502-LV Injectable Bonding Epoxy LV™ Hardener (Part B)

How AV-502-LV Works

AV-502-LV has a user-friendly mixing ratio (2:1 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™ prior to manual or automatic injection.

Optional Products

- AV-522 Crack Sealing Paste™

Packaging – *Packaging size does not mean fill volume

- Dual Cartridge (Qty: 6) - Part A: 10.14 fl. oz. (300 ml), Part B: 5.07 fl. oz. (150 ml)

Physical Properties*

UNCURED AV-502-LV – Resin (Part A) and Hardener (Part B)		
Appearance	Clear	
Viscosity (Parts A+B)	680 cP @ 73°F / 23°C	ASTM C881
Flash Point (Part A)	≥302°F / ≥150°C	
Flash Point (Part B)	>194°F / >90°C (Closed Cup)	
Solids	100%	
Specific Gravity (Parts A+B)	1.09 @ 72°F / 22°C	
Density	9.1 lbs./gal. 1,090 kg/m^3	
Working Time (100 g)	45 minutes	
Gel Time	135 minutes @ 73°F / 23°C	ASTM C881

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CURED AV-502-LV		
Tensile Strength	7,158 psi (49.3 MPa) @ 60°F / 16°C	ASTM D638
Elongation @ Break	6.8% @ 60°F / 16°C	ASTM D638
Compressive Yield Strength	11,806 psi (81.4 MPa) @ 60°F / 16°C	ASTM D695
Compressive Modulus	290,366 psi (2,002 MPa) @ 60°F / 16°C	ASTM D695
Linear Coefficient of Shrinkage	0.003 in/in	ASTM D2566
2-Day Bond Strength (Hardened to Hardened Concrete)	3,184 psi @ 60°F / 16°C	ASTM C882
14-Day Bond Strength (Hardened to Hardened Concrete)	3,231 psi @ 60°F / 16°C	ASTM C882
14-Day Bond Strength (Fresh to Hardened Concrete)	1,852 psi @ 73°F / 23°C	ASTM C882
Absorption	0.2% @ 73°F / 23°C (24 hours)	ASTM D570
Heat Deflection	120°F / 49°C	ASTM D648
Hardness Shore D	86	ASTM D2240
Flexural Strength	10,600 psi (73.0 MPa)	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 contamination 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 Guidelines
For best performance, the ideal application temperature range is between 70-80°F (21-27°C) but can be extended between 55-90°F (13-32°C). Mix two 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 with larger mixing quantities and higher temperatures.

Cleaning
AV-502-LV may be removed from tools with Avanti's AV-208 Technical Grade Acetone™ or warm soapy water before they are fully cured. Use AV-222 Cleaner™ to remove cured epoxy from tools by soaking the tools for extended time in AV-222.

- AV-208 Technical Grade Acetone™– removes moisture from equipment (see Performance section)
- AV-222 Cleaner™– 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. Do not use open flame as a heat source to warm the product.

Safety
Always use OSHA-approved personal protective equipment (PPE). Refer to the SDS for complete safety precautions. The Safety Data Sheets and Mixing Guidelines are available 24/7 at avantigrout.com.

Shipping (Motor and Air Freight available)

- Motor Class 55
- Resin: Not Regulated
- Hardener: UN2735, Amines, liquid, corrosive, n.o.s. (Polyetheramine, Aliphatic amine)

Notice
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