ETI Injection Epoxy

ETI injection epoxies are two-component, high-solids formulations for the injection into cracks in concrete. Dispensed through a static mixing nozzle using either a manual dispensing tool, these epoxies provide a waterproof, high strength (structural) repair.

Features

- Bonds chemically to concrete, providing structural repair (meets the requirements of ASTM C881 for structural repair epoxy)
- Formulated for maximum penetration under pressure (all viscosities)
- Seals out moisture, protecting rebar in the concrete from corrosion and flooring from moisture damage
- Reliable mixing and ratio control when used with the Simpson Strong-Tie® Optimix® static mixing nozzle (included with cartridge)
- Suitable for pressure injection or gravity-feed applications
- Non-shrink material resists oils, salts and mild chemicals

ETI-SLV Super-Low-Viscosity Epoxy

- Super-low viscosity (350 cP) repairs hairline cracks (0.05 mm) and cracks up to 6 mm in width
- Penetrates smallest cracks

ETI-GV Gel-Viscosity Epoxy

- Gel-viscosity (non-sag) epoxy repairs medium cracks 2.4–6.4 mm in width
- Decreases in viscosity under pressure, increasing flow
- Suitable for use as pick-proof sealant around doors, windows and fixtures

Applications

- Suitable for repairing non-moving cracks in concrete walls, floors, slabs, columns and beams.
- ETI can be used to inject cracks in damp or wet conditions with excellent results. Not for use in actively leaking cracks. *(See Definitions on page 93)*
- Apply to concrete 15°C or above. For best results, warm material to 15°C or above prior to application.
- Mixed material in nozzle and injection fitting hardens in 15 minutes (ETI-SLV), and in 60 minutes (ETI-GV) at temperatures of 4°C or above.
- **Pressure injection applications require crack repair accessories (E-Z-Click™ Injection System and Paste-over Material). Refer to page 100 for further information.**

Base Material

- Cracked Concrete

Approvals

ETI-SLV Super-Low-Viscosity Epoxy

- Meets or exceeds AASHTO M-235 and ASTM C881 Type I and IV, Grade 1, Class B and C

ETI-GV Gel-Viscosity Epoxy

- Meets or exceeds AASHTO M-235 and ASTM C881 Type I and IV, Grade 3, Class C

Installation

Refer to pages 101–105 for installation procedures.

Refer to page 102 for cartridge usage estimation guide.

Shelf Life

24 months from date of manufacture in unopened cartridge.

ETISLV (488 ml)
(Includes 1 mixing nozzle EMN022)

ETIGV22 (650 ml)
(Includes 1 mixing nozzle EMN022)

Suitable for gravity-feed, pressure injection, and overhead applications.

Storage Conditions

For best results, store between 5–35°C.

Colour

Final product colour: ETI-SLV — dark purple/black; ETI-GV — grey.

Clean Up

Removal of cured adhesive — Chip or grind off surface. Uncured Adhesive — Wipe up with cotton cloths. If desired, scrub area with abrasive, waterbased cleaner and flush with water. If approved, solvents such as ketones (MEK, acetone, etc.), lacquer thinner, or adhesive remover can be used. DO NOT USE SOLVENTS TO CLEAN ADHESIVE FROM SKIN. Take appropriate precautions when handling flammable solvents. Solvents may damage surface to which they are applied.

Chemical Resistance

Very good to excellent against distilled water, inorganic acids and alkalis. Fair to good against organic acids and alkalis, and many organic solvents. Poor against ketones.

Material Properties

Property		Test Method	ETI-SLV Results*	ETI-GV Results*
Viscosity (24°C)		ASTM D2556	350 cps	Non-sag gel
Bond strength (moist cure)	2 days	ASTM C882	21.4 MPa	7.6 MPa
	14 days		26.9 MPa	27.5 MPa
Tensile strength (7 days)		ASTM D638	70.33 MPa	—
Tensile elongation at break			2.10%	—
Compressive yield strength (7 days)		ASTM D695	113.8 MPa	79.8 MPa
Compressive modulus			3,923 MPa	2,780 MPa
Heat-deflection temperature		ASTM D648	60°C	12.8°C
Water absorption (24 hour soak)		ASTM D570	0.25%	0.58%
Linear coefficient of shrinkage		ASTM D2566	0.0035	0.000
Gel time (60-gram mass)		ASTM C881	16 min.	135 min
Volatile Organic Compounds (VOC)		EPA Method 24 ASTM D2369	23 g/L	4 g/L
Initial cure (22°C)		—	24 hours	24 hours
Mixing Ratio by Volume (Part A:Part B)		—	2:1	1:1

*Material and curing conditions: 73 ± 2°F, unless otherwise noted.

Definitions

Dry Crack: A crack containing no moisture.

Wet Crack: A crack containing moisture (damp or containing standing water). The surface can be dried and will remain dry during the paste-over operation.

Seeping Crack: A wet crack that slowly oozes water. After being dried, the surface slowly becomes wet again.

Mildly Leaking Crack: A crack with a slow trickle of water emitting from its face.

Cartridge Size and Accessories

Cartridge	Size	Box Qty	Model No.
	488 ml	10	**ETISLV**
	650 ml	10	**ETIGV22**

Dispensing Tools	Description	Model No.
	Manual dispensing tool	**EDT22S**

Mixing Nozzles		
	Mixing nozzle Pack of 6	**EMNO22-RP6**

1. Use only appropriate Simpson Strong-Tie® mixing nozzles in accordance with Simpson Strong-Tie instructions. Modification or improper use of mixing nozzle may impair epoxy performance.
2. Dispensers must be configured for 2:1 cartridge ratio when using ETISLV.

Please see pages 99–100 for further information on crack repair accessories (Dispensers, E-Z-Click™ Injection System and Paste-over Material)