

CONCRESlVE® STANDARD LVI

Low viscosity epoxy adhesive

DESCRIPTION:

CONCRESlVE® STANDARD LVI is a two component, moisture insensitive, 100% solid, low viscosity epoxy adhesive. It penetrates cracks and voids, bonding hardened to hardened concrete. It can be mixed with aggregate to make high strength, high modulus epoxy concrete and mortars.

RECOMMENDED FOR:

- Use as a high strength binder for grouts and mortars
- Repairs to concrete slab or walls
- Injection of cracks as small as 0.002 in. (0.05 mm) and less than 1/4 in. (6 mm)
- Repair of beams or columns
- Anchoring bolts, dowels and reinforcing bars
- Consolidating rock pockets or honeycombs
- Crack injection
- Repair of foundations
- Grouting shear keys

FEATURES/BENEFITS:

- Rapid strength gain
- Creep resistant
- Low viscosity
- Bonds to damp or dry concrete
- Meets ASTM C 881 Type, I Grade 1, Class B & C

PACKAGING/ESTIMATING:

CONCRESlVE STANDARD LVI is packaged in 3 U.S. gal (11.4 L) units. One gallon (3.8 L) equals 231 in³ (378.5 cm³).

PERFORMANCE DATA¹:

Tensile Strength	7500 psi (34 MPa)
Elongation at Break (ASTM D 638)	1% minimum
Compressive Yield Strength	11,000 psi (76 MPa)
Compressive Modulus (ASTM D 695)	2.5 x 10 ⁵ (1.75 GPa)
Heat Deflection Temperature (ASTM D 648)	124 °F (51 °C)
Bond Strength, Slant Shear (ASTM C 882)	2 day 1500 psi (10 MPa) 7 day 2000 psi (14 MPa)
Hardness, Shore D (ASTM D 2240)	80 - 90
Thin Film Cure (ASTM C 882)	2 days

Initial Cure (80% of Ultimate Strength)
(ASTM D 695)

24 hours

Pot Life

150 gm mass, 40 minutes

Viscosity (mixed)

300 cps ± 50

Shelf Life

A minimum of 18 months when stored in sealed containers at temperatures between 40 °F and 90 °F (4 °C and 32 °C)

Components

	Part A (Resin)	Part B (Hardener)
Form	Liquid	Liquid
Color	Amber	Amber
Mix Ratio (by volume)	2	1
Mixed Color	Amber	

1 Test conditions: 77 °F (25 °C), cured 7 days. Properties listed are typical and descriptive of the product, and may be used only as a guide for determining suitability for a particular application.

The following information regarding surface preparation mixing and application is provided as a brief overview. For detailed instructions before use of the product, reference the CONCRESlVE STANDARD LVI product packaging.

SURFACE PREPARATION:

Concrete Surfaces

Substrate may be dry or damp, although optimum results are obtained on a dry surface. New concrete must be fully cured (28 day minimum).

Remove grease, wax, oil contaminants and curing compounds by scrubbing with an industrial grade detergent or degreasing compound, then follow with mechanical cleaning. (Ref: ASTM D 4258). Remove weak, contaminated or deteriorated concrete by shotblasting, bushhammering, gritblasting, scarifying or other suitable mechanical means. Follow mechanical cleaning with vacuum cleaning. (Ref: ASTM D 4259)

Steel Surfaces

Remove dirt, grease and oil with a suitable, industrial grade, cleaning and degreasing compound. (Ref: SSPC-SP-1)

Remove rust and mill scale by gritblasting. Blast steel to white metal. Follow gritblasting with vacuuming or oil-free, dry-air blast. (Ref: SSPC-SP-10 and NACE-2)

MIXING:

Mix only the amount of material that can be used before the pot life expires. Thoroughly stir each component before mixing. Measure (ratio) each component carefully and then add Part B (Hardener) to Part A (Resin). Mix parts A & B using a low-speed drill (600 rpm) and mixing paddle (i.e. a Jiffy Mixer). Carefully scrape the sides and bottom of the container while mixing. Keep the paddle below the surface of the material to avoid entrapping air. Proper mixing will take at least 3 to 5 minutes. Well mixed material will be free of streaks or lumps.

APPLICATION:

Patching Mortars and Grouts

Use graded silica sand; washed, kiln dried and bagged. A carefully selected blend of sands with a low void content will require less epoxy for a given volume of mortar compared to ungraded sands. A good "skip" gradation for low void content is a blend by weight of two parts #12 or #16 mesh to one part #80 to #100 mesh. When graded sands are not available, a good general purpose sand is #30 mesh silica.

CONCRESE STANDARD LVI can be poured into cracks or dispensed with most 2:1 plural component pumps.

Bolt Rebar Grouting

Holes may be cut by either rotary-percussion drilling followed by air blow-out with oil free compressed air or diamond core boring followed by water flush. The hole must be free of water before grouting. Where holes are precast into the concrete, cast them undersized and drill to fit.

The optimum hole size is 1/4 in. (6 mm) larger than that of the bar; larger annular spaces are less desirable.

Pour a measured amount of epoxy into the hole. Insert the bar, displacing the epoxy, then secure the bar in the center of the hole. Remove excess epoxy from around the hole before it hardens. For grouting holes deeper than 2 ft (61 cm), pressure grouting is recommended.

CLEAN UP:

Mixed epoxy is much easier to clean up before it hardens. Solvents such as acetone, methyl ethyl ketone (MEK) or toluene may be used. Commercial epoxy/paint stripper solvents are recommended for hardened epoxy. Consult solvent manufacturer's usage recommendations.

LIMITATIONS:

- Application Temperature Range is 50 °F to 105 °F (10 °C to 41 °C).
- Do not add solvents or water to epoxy components.
- Neat epoxy binder should not be applied greater than 1/4 in. (6 mm). Consult with manufacturer for recommendation.
- Bonding to a clean damp surface is possible but less desirable than to a dry surface. When applying this product to a damp surface, remove free water by oil-free airblast.
- CONCRESE adhesives are two-component epoxies formulated for industrial and professional use only, and must be kept out of the reach of children. These products contain epoxy resins and amine curing agents which may be CORROSIVE and potentially HARMFUL to your health if not stored and used properly. Hazards can be significantly reduced by observing all precautions found on Material Safety Data Sheets (MSDS), product labels and technical literature. Please read this literature carefully before using these products.

RELATED BULLETINS:

Material Safety Data Sheet — CONCRESE STANDARD LVI

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