



DATA SHEET NO. 3700-622S

REZI-WELD™ LV STATE Ultra-Low Viscosity Injection Epoxy

DESCRIPTION

REZI-WELD LV STATE is an ultra-low viscosity, two-component, 100% solids, rapid setting, epoxy-based, structural injection resin. It is a solvent-free, low odour, high strength, high modulus, moisture-insensitive, ultra-low viscosity epoxy resin system. REZI-WELD LV STATE resists most chemicals and forms a structural, monolithic bond with typical concrete.

Its low surface tension facilitates deep penetration into hairline to medium-sized cracks. The 100% solids formulation is volumetrically stable, ensuring a solid bond to both sides of the crack.

USES

REZI-WELD LV STATE is designed for gravity feeding or pressure injecting. It is available in two cartridge sizes for ease of use. It is also available in bulk units and may be injected using two-component metering pumps. It is suitable for injecting fine, non-moving structural cracks in concrete and wood for long-term repairs. REZI-WELD LV STATE makes an economical, easy-to-use epoxy mortar for patching or repairing defects in concrete substrates.

FEATURES/BENEFITS

- Ultra-low viscosity is ideal for pressure injection and gravity feeding.
- Advantageous as a low viscosity, epoxy adhesive binder.
- Bonds cured concrete to wood, steel, or plastic concrete.
- Combines with aggregate to form interior, non-skid topping.
- Resists industrial chemicals as well as impact and attack from moisture.
- Features low-viscosity, high-modulus, high-strength, self-levelling characteristics.
- Furnished in two convenient cartridge sizes.

PACKAGING

180 mL (6.1 Oz.) Cartridge
475 mL (16 Oz.) Cartridge
11.4 L (3 U.S. Gal.) Unit
57 L (15 U.S. Gal.) Unit

COVERAGE

3.8 L (1 U.S. gal.) neat covers approximately 2.09 – 2.66 m²/L (85 – 100 ft.²/gal.), depending on surface porosity and end use application. 3.8 L (1 U.S. gal.) mixed 1:1 with dry aggregate yields approximately 5,735 cm³ (350 in.³) of grout.

SHELF LIFE

Two years in unopened containers and cartridges when stored between 10° - 35° C (50° - 95° F).

SPECIFICATIONS

- ASTM C 881-99, Type I, II, IV and V, Grade 1, Classes B & C
- AASHTO M 235 Type I, II, IV and V, Grade 1, Classes B & C
- Various department of transportation approvals

TECHNICAL DATA

Property	Typical Data	Test Method
7 day cure at 25° C		
Viscosity, cps	450 - 550	ASTM C881
Tensile Strength	49.6 MPa (7,200 psi)	ASTM D638
Elongation, %	8.8	ASTM D638
Hardness, Shore D	85	ASTM D2240
Flexural Strength	52.2 MPa (8,500 psi)	ASTM D 790
Compressive Yield Strength	82.7 MPa (12,000 psi)	ASTM D695
Compressive Modulus	1,800 MPa (260,000 psi)	ASTM D695
Bond Strength: 2 day	14.4 MPa (2,100 psi)	ASTM C882
	14 day	20.6 MPa (3,000 psi)
Heat Deflection Temperature	48° C (120° F)	ASTM D648
Absorption, % (24 hours)	0.85%	ASTM D570
Linear Coefficient of Shrinkage	0.004	ASTM D2566
Component Properties	Resin	Hardener
Mix Ratio (PBV=Part by volume)	2 PBV	1 PBV
Appearance	Clear	Amber

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Pot Life (100 gms) @ 21.5° C	20 - 30 minutes	ASTM C881
Tack-Free Time @ 30 Mils @ 21.1° C	4 – 5 h	ASTM C 879
VOC Content	5 g/L	

All technical data is typical information, but may vary due to test methods, conditions, and operators.

APPLICATION

Surface Preparation ... All surfaces to be bonded must be free of standing water and completely clean of dirt, rust, curing compounds, grease, oil, paint, waxes, and other materials which would prevent an optimal bond. Concrete should be prepared by mechanical abrading or high pressure water jetting to a sound surface. Vacuum or blow dust away with oil-free, compressed air. Mechanically abrade metal base plates to a bright metal finish. Exposed steel surfaces should be sandblasted and vacuumed clean; if not possible, degrease the surface and use sandpaper or a wire brush to reveal continuous, bright metal.

Mixing ... The resin and hardener (contained in the dual cartridge) must be conditioned between 18° - 29° C (65° - 85° F) at the time of application. Use the double-boiler method or store material in a warm room prior to application. Shake the cartridge vigorously for 60 seconds then stand the cartridge upright for 60 seconds, allowing the bubbles to rise to the top.

APPLICATION METHOD

1. Substrate temperature must be 4° C (40° F) and rising at the time of application.
2. Ensure static mixer nozzle is free of obstructions.
3. Remove nose cap.
4. Remove nose plug.
5. Insert static mixer onto cartridge nose. Slide retaining nut (located in sealed bag) down static mixer shaft.
6. Tighten retaining nut onto cartridge nose.
7. Load into standard dual cartridge dispenser tool.
8. Dispense and discard approximately a 73.2 mm (3") bead of material until a uniform, amber-colour is achieved
9. Re-insert nose plug and seal with nose cap to seal a partially used cartridge.
10. Follow all instructions prior to application of partially used cartridge.

Crack Injecting ... Epoxy can be pressure injected into fine cracks that are small (3.2 mm [1/8"] maximum width). Surface seal the crack and set the REZI-WELD injection ports using REZI-WELD GEL PASTE STATE or POLY-GRIP™ from W. R. MEADOWS. Allow sufficient time for the surface seal to harden prior to injecting. If using one of the two cartridges, always use a high ratio application gun having a 35:1 ratio mechanical advantage.

Gravity Feed ... Seal underside of elevated slab prior to filling if cracks reflect full depth. Pour neat, properly mixed and conditioned REZI-WELD LV STATE into v-notched crack. Continue placement until completely filled.

Interior, Non-Skid Topping ... Apply at a rate not to exceed 2.66 m²/L (100 ft.²/U.S. gallon). Then apply layer of sand or grit over epoxy and allow epoxy to cure. Blow or vacuum excess sand away. NOTE: REZI-WELD LV STATE IS NOT TO BE USED AS A FINISHED FLOOR COVERING OR PROTECTIVE TREATMENT.

Aggregates for Epoxy-Resin Mortars ... Combine clean, dry aggregate with freshly mixed epoxy in a ratio of one part epoxy to 4 - 5 parts, by volume, of graded aggregates (not to exceed six parts sand). Patch thickness should not exceed 50.5 mm (1.5") per lift.

Cleanup ... Clean tools and equipment immediately with toluene or xylene. Clean equipment away from all ignition sources and avoid breathing vapours or allowing epoxy-containing solvent to contact skin. Should this material come in contact with skin, wash thoroughly with soap and water, not solvent.

PRECAUTIONS

DO NOT DILUTE. Mix complete units only. Not recommended for use when the concrete temperature has been below 4° C (40° F) for the past 24 hours. Do not use to seal cracks under hydrostatic pressure. Do not warm epoxy over direct heat. REZI-WELD LV STATE is not to be used as an exterior coating, as it is not resistant to ultraviolet rays. Do not use when substrate temperature at time of application is above 43° C (110° F).

HEALTH HAZARDS

This epoxy is corrosive. Personal protective equipment is necessary. Unused epoxy will generate excessive heat, especially in large quantities. Unused epoxy should be mixed with dry sand in the container to help lower heat. Refer to Material Safety Data Sheet for complete health and safety information.

LEED INFORMATION

May help contribute to LEED credits:

- MRc9: Construction and Demolition Waste Management

MASTERFORMAT NUMBER AND TITLE

03 01 00 - Maintenance of Concrete
03 64 23 - Epoxy Injection Grouting

For most recent data sheet, further LEED information, and SDS, visit www.wrmeadows.com.

2017-03-21



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