

Technical Data Sheet



Distributed by:
Best Materials LLC
 Phone: 800-474-7570, 602.272.8128
 Email: sales@bestmaterials.com
 Website: www.bestmaterials.com

Partnering through service,
 innovation, and integrity

POLYQuik® FASTPATCH LV

Low Viscosity Urethane

DESCRIPTION

POLYQuik® FastPatch LV - Designed to have an ultra-low viscosity and cure quickly, even in cold temperatures. LV is a tough, zero VOC, two-component urethane that sets quickly, allowing fast return to service. It can be used in applications that require a fast setting, high strength material.

WHERE TO USE

- **Foundations**- Concrete Structures
- **High Load Areas**- Footings, Rail Applications
- **Anchoring** – Securely Fasten Bolts or Rebar
- **Cracks & Spalls**- Fill Narrow Cracks

FEATURES AND BENEFITS

- **High Compression Strength**- Supports heavy loads
- **Easy-to-Use**- Meter application possible
- **Fast Curing**- Quick return to service
- **Excellent Adhesion**- Bonds strongly to concrete
- **Low Viscosity**- Flows into place easily
- **Cures at Low Temperatures**- Year round use

PACKAGING

- 600-mL Cartridge
- 5-Gallon Buckets
- 50-Gallon Drums

COLORS

- Gray
- Other Colors Available Upon Request

YIELD

- 600-mL Cartridge = 36.61in³
- 5-Gallon Bucket Sets (10-gal total) = 2310in³
- 50-Gallon Drum Sets (100-gal total) = 13.36ft³

SHELF LIFE

1 year when properly stored. Mix Before Using.

STORAGE

Store and ship this product in a clean, dry, low-humidity, shaded or covered environment at 60 to 90° F (15 to 32° C).

TECHNICAL INFORMATION

Typical Properties

VOC , lbs/gal (g/L), ASTM D 2369	0
Viscosity , cps, ASTM D 4878, mixed	120
Service temperature , ° F (° C)	-30 to 170 (-34 to 77)
Potlife , min., 70° F (21° C)	1-2
Tack-free time , min., 70° F (21° C)	3-4
Hardness , Shore D, ASTM D 2240	78
Concrete adhesion , psi (MPa), ASTM D 4541	836 (5.8) 100% substrate
Anchoring Strength , lbf, ASTM E 488, ½" threaded rod, 6" depth	10,101
Anchoring Strength , lbf, ASTM E 488, #4 rebar, 6" depth	7,800

Processing Parameters

Ratio by volume	1 to 1 (Resin to Iso)
Application temp , ° F (° C)	10 to 110 (-12 to 43)
Mixer dimensions ,	13 mm diameter with 32 elements

Cure Time (Resin conditioned at 70°F or 21°C)

Temperature, 50% RH	Gel time, min.	Tack-free time, min.
0° F (-18° C)	5-10	20-30
40° F (4° C)	3-5	7-10
70° F (21° C)	2-3	3-4
107° F (42° C)	1-2	2-3

Compression (ASTM C579) 2" cubes

Time (hrs)	Max Load, lbf (kN)	Comp. Strength, psi (Mpa)
6	23,410 (104.1)	5,853 (40.4)
24	26,010 (115.7)	6,503 (44.8)
168	26,030 (115.8)	6,508 (44.9)

APPLICATION

SURFACE PREPARATION

CONCRETE

1. The concrete surface being repaired must be fully cured 28 days, structurally sound (200psi or greater according to ASTM D7234), clean (ASTM D4258), and dry (less than 5%, ASTM E1907).
2. Any water or oil present may result in poor adhesion.
3. Use 150 PSI, continuously dry, compressed air to blow out loose debris, dirt and dust prior to applying product. Moist concrete can be torched dry
4. As necessary, plug all gaps or joints surrounding the concrete area with foam backer rod and choose a backer rod width that fits tightly in the area.

OTHER MATERIALS

1. Previously installed polymer materials must be tested to determine the best method of preparation to achieve acceptable adhesion. Consult manufacturer for recommendation. Typically, methods will include solvent cleaning, abrading, and vacuuming surface.
2. FASTPATCH LV is not typically recommended for use in asphaltic roadways. Exceptions do occur; contact WVCO for more details.

GRAVEL INFORMATION

1. Gravel may be purchased from multiple sources. Gravel should be approximately 3/8" round rock that is washed and dried.
2. Gravel makes up for 40-50% of the repair volume.
3. Typically 20-lbs of gravel is required for each gallon of mixed resin/iso.
4. Gravel can be approved by WVCO. Contact WVCO for gravel testing and approval.

CARTRIDGE DISPENSED

PROCESSING

1. Condition cartridges to approximately 70°F (21°C) for 24-hours before using.
2. Use battery or pneumatic powered applicators that are designed for the supplied cartridges. Contact WVCO for proper selection.
3. Hand pumping is not recommended due to the increased chances of poor mixing. Contact supplier for further instructions if hand pumping is required.
4. Use supplied mix tubes for applications into narrow cracks.
5. Use a 32-element 13-mm diameter static mix tube with a pneumatic gun for applications into larger repairs such as spalls or anchoring applications. Contact WVCO for supplies of 32-element 13-mm static mix tubes.

CARTRIDGE APPLICATION

1. Use a 1-to-1 pneumatic dispenser and ensure that the pneumatic dispenser is the proper size. Set the pressure to no more than 20psi for pneumatic applications.
2. Remove the retaining nut and caps from the cartridge.
3. Keep the cartridge upright during assembly.
4. Check alignment of plungers inside cartridge; level if necessary.
5. Place mix-tube on cartridge nozzle and hand tighten the retaining nut over the mix-tube.
6. Keep cartridge upright and load into applicator gun.
7. While pointing cartridge upright, trigger to remove any air trapped in cartridges.

8. Point cartridge over waste container and dispense initial material (20-40mL) outside the area to be repaired. Decrease application pressure as necessary to ensure proper flow.

9. Fill in concrete repair area from the bottom up. Avoid triggering on and off in repair area. In cases where concrete elevations are different, fill to the lower slab height.

METER DISPENSED

PROCESSING

1. Use WVCO meter or equivalent at a 1 to 1 ratio by volume. For various metering applications contact Willamette Valley Company Precision Technologies division for equipment recommendations.
2. Condition RESIN, ISO and GRAVEL to approximately 70°F (21°C) for 24 hours before use.
3. Mechanically mix RESIN until pigment is dispersed uniformly (at least 5 minutes) before proportioning begins. Use a mixer fitted with blades that are 1/3 the diameter of the container to redistribute any settled material.
4. Test the meter operation of LV before dispensing in the concrete area. Dispense in test container to verify LV color is uniform and the material sets uniformly up in 2-5 minutes. Dispense the Resin and Iso separately, measuring a 1:1 volume of each to ensure proper ratio.
5. Stopping more than 45-seconds can clog mix-tubes. Change mix-tubes if dispensing stops more than 45-seconds at 70°F (21°C). Elevated temperatures decrease mix-tube life.
6. Periodically inspect applied material for uniformity and proper set. If inspected areas are non-uniform; stop, change mix tube and check meter operation for compliance. Contact WVCO if problems persist.

METER APPLICATION

1. When appropriate place gravel in concrete below surrounding surface by 0.25 inches (0.60 cm).
2. Insert mixing nozzle in the lowest elevation of the gravel and dispense until LV floats on the gravel. Move the mixing tube to higher elevation while dispensing until the entire concrete area is flooded with LV.
3. Using a plastic trowel, level FASTPATCH LV with surrounding surface until it cures. Do not overfill concrete area.

NOTE: Application of any FASTPATCH LV cartridge must be performed continuously. Stopping before the cartridge is completely dispensed may result in the material setting up in the mix-tube.

NOTE: Material is workable for approximately 2-minutes at 70°F. Colder temperatures and cold gravel can slow the cure. Warmer temperatures can speed the cure. Return to service time is typically 1/2-hour at 70°F.

NOTE: FASTPATCH LV is an aromatic compound discoloration from UV light may occur, however, the physical properties are unaffected.

CLEANING & MAINTENANCE

- Clean equipment with POLYQUik® Cleaner or acetone immediately after use. Cured material must be removed mechanically.

HEALTH AND SAFETY

Willamette Valley Company recommends that you read and become familiar with the MSDS before using this product.

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For more information call:

800.474.7570, 602.272.8128

Website: <http://www.bestmaterials.com> ✉ E-mail: sales@bestmaterials.com

WILLAMETTE VALLEY COMPANY

DIVISIONS

WESTERN DIVISION

1075 Arrowsmith Street
PO Box 2280
Eugene, OR 97402
Tel 541.484.9621
www.polyquik.com
www.wvcorailroad.com

EASTERN DIVISION

6662 Marbut Road
Lithonia, GA 30058
Tel 888.878.9826

MIDWEST DIVISION

1549 Hwy 2
Two Harbors, MN 55616
Tel 218.834.3922

PRECISION TECHNOLOGIES DIVISION

675 McKinley Street
Eugene, OR 97402
Tel 541.484.2368
www.pre-tec.com

SOUTHERN DIVISION

100 Dixie Mae Drive
PO Box 4450
Pineville, Louisiana 71361
Tel 318.640.5077

SUBSIDIARIES

CANADIAN WILLAMETTE

325 Edworthy Way
New Westminster BC V3L 5G4
Tel. 800.663.4298

ECLECTIC PRODUCTS INC.

Corporate Office
1075 Arrowsmith Street
Eugene, OR 97402
Tel 541.284.4667
www.eclecticproducts.com

IDAHO MILL & GRAIN

445 North 430 West
PO Box 188
Malad City, Idaho 83252
Tel 208.766.2206

TAPEL WILLAMETTE LTD. S.A.

Av. Estero La Posada 3625 Parque
Industrial Coronel Coronel, Chile
Tel 011.56.41.928.100
www.tapel.cl



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