

Technical
Data Sheet



Willamette Valley Company

www.wilvaco.com

800.333.9826

Partnering through service,
innovation, and integrity

FastPatch POLYPRIME

Fast-setting Primer for Concrete and Steel Substrates

DESCRIPTION

FastPatch POLYPRIME is a two-component, 100% solids, rapid setting primer for elastomeric coatings. Primer can be applied by plural-component proportioner or simple brush/roller applied. It is used to create a strong bond between the substrate and topcoat, as well as help reduce the number of pinholes on porous substrates.

WHERE TO USE

- **Walls & Floors**—concrete and steel
- **Expansion Joints** – roadways, parking decks and warehouses
- **Primer Coatings**— for polyurea, polyurethane, epoxy
- **Porous Substrates**—prepared concrete
- **Low Temperature Applications**—cures on cold substrates

FEATURES AND BENEFITS

- **Superior Adhesion**—tight bond to substrate and topcoat
- **Damp Substrates**—combats moist environments
- **Topcoat in as Little as 20 Minutes**—rapid return to service
- **Seals Concrete Surfaces**—minimizes pinholes
- **Ease of Application**—can be metered or hand applied

PACKAGING

600-mL Cartridge
1-Gallon (3.8 L) Jugs
5-Gallon (18.9 L) Pails
50-Gallon (189 L) Drums

COLORS

Amber

YIELD

300 ft² per gallon at 4 mils
(27.8 m² per liter at 0.1 mm)

SHELF LIFE

1 year when properly stored.

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, Resin / Iso	1250 / 275
Service temperature , ° F (° C)	-22 to 170 (-30 to 82)
Gel time , min. at 70° F (21° C)	4 (Undiluted) 6 (Acetone Diluted)
Ready for topcoat , min.	15 - 100 (see Cure Time chart)
Concrete adhesion , psi (MPa), ASTM D 4541	> 500 (3.4) 100% Substrate
Adhesion to steel , lbf/in (N/m), ASTM D 903	35 (3.9) 100% cohesive

Typical Set Times (Slower set times available. Contact WVCO for information.)

Substrate Temperature	Set Time (Min)	Max. Recoat Time, (Hrs)
40° F (4° C)	60	24
70° F (21° C)	20	8 - 12 hrs (same day)
90° F (32° C)	10	8 - 12 hrs (same day)

Processing Parameters

Ratio by volume Resin : Iso	1 to 1
Ambient application temperature , ° F (° C)	40 to 90 (4 to 32)
Recommended thickness , mils (mm)	1 to 10 (0.025 to 0.25)

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. Concrete surface must be dry and clean. Water or oil present can result in poor adhesion. Apply product only if surface temperature is 5° F (3° C) above dew point to avoid application over damp surface.
3. Remove any contaminants before profiling surface.
4. It is recommended to profile surface according to ICR1 Guide 03732 to a minimum of CSP 3 by abrasive blasting.
5. The surface must have low moisture vapor transmission (less than 3 lb/24 hr/1000 ft², RMA Test Method).
6. Use a minimum 120 PSI continuously dry compressed air to blow out loose debris, dirt and dust prior to applying product. Moist concrete can be torched dry. If moisture returns immediately after torching, stop and do not install POLYPRIME in this area.
7. Use a steel bristle brush to remove dirt on vertical and horizontal concrete surfaces and use compressed air to blow out prior to applying product.
8. Fill all voids and cracks between 0.06-0.50" (1.5-12.5 mm) with POLYQuik® HPU Filler or other suitable filler. Contact your WVCO representative for filler options and technical recommendations.
9. POLYPRIME is not recommended for use on asphaltic materials, bare ground, dirt, grass or other non-structural surfaces. Contact your WVCO representative for recommendations, and before using on surfaces intended for immersion service.

STEEL & OTHER METALS

1. Steel and other metal surfaces must be cleaned before blasting according to SSPC-SP1. Remove any sharp edges, weld splatters and other surface imperfections.
2. Dry abrasive blast the surface according to SSPC-SP10 / NACE No. 2 Near White standard (0.003" (0.08 mm) profile).
3. Test the surface for non-visible soluble salt contamination according to NACE 6G186. If necessary treat the surface with CHLOR*RID or equivalent chloride remover until less than 3mg/cm² is detected.
4. Apply POLYPRIME only if metal surface temperature is 5° F (3° C) above the dew point to avoid application over damp surface. Apply primer within the same day of blasting, before the prepared metal surface is chemically contaminated and before flash rusting or oxidation reoccurs.
5. For aluminum and galvanized metals, and before using on surfaces intended for immersion service, contact your WVCO representative for additional information.

PROCESSING

1. If possible, precondition material to ≈ 70°F (21°C) before use.
2. Mix POLYPRIME resin in its original container before use. Do not dilute with isopropyl alcohol or any other alcohol-based products. Mix resin for 2 to 3 minutes using an appropriate mixer for the package size. Contact WVCO for mixing recommendations.

METERED SPRAY APPLICATION

1. Before priming, protect adjacent surfaces with tape or other kinds of protective barriers.
2. Begin priming only if the topcoat or joint sealant can be applied before exposure to rain or the formation of dew.
3. Concrete is a porous material that contains air. When the temperature of the concrete rises, the air expands. This phenomenon, out-gassing, may produce pinholes or blisters in primers and topcoat systems. To reduce the risk of pinholes from out-gassing, apply POLYPRIME and topcoat when the concrete temperature is stable or dropping.
4. Contact your WVCO representative for plural component proportioner recommendations. Proportioner should be able to heat resin and iso to 110-150°F (43-66°C).
5. Proportioner must generate a minimum spray pressure of 2,000 psi (13.8 MPa), maintain a stable pressure during spray and keep minimal pressure differential (less than 300 psi) between resin and iso.
6. Contact your WVCO representative for high and low output application equipment, setups and spray information.

SPRAY AND BACKROLL

1. This method is recommended for detail priming, large flat areas, vertical areas, and confined spaces where solvents are prohibited. Do not use acetone when spraying. This is a fire and explosion hazard.

2. Apply FastPatch POLYPRIME no more than 4 wet mils (0.1 mm) per application. Make sure primer does not puddle or build up in bugholes, crevices or joints.
3. Backroll the primer into porous surfaces using a 1/2" (12.5 mm) nap roller. Work primer into corners with a brush.
4. Check primer for set before topcoat by touching the surface and determining there is no transfer. Remove excess primer and foamed areas by scraping or sanding.

NOTE: Topcoats must be applied before primer becomes contaminated with water, debris, oil, or other foreign materials. If maximum recoat time is exceeded, mechanically abrade or remove primed surface and re-prime area. Spray applications may require longer primer cure times than stated in the table for best results.

CLEANING & MAINTENANCE

- Use POLYQuik® Cleaner on parts after every use. Do not immerse the entire applicator in Cleaner.
- CLEAN Y-STRAINERS REGULARLY.
- Contact your WVCO representative for pump flushing and long term storage stability recommendations.

MANUAL MIXING AND APPLICATION

PREPARATION

1. POLYPRIME can be mechanically mixed using a mixing blade and drill, or manually with a paint stir stick. Care must be taken to mix and apply the material onto the concrete surface rapidly to avoid pot life issues.
2. Only mix material in a 1:1 (resin:iso) ratio by volume. Acetone can be used to slow the material cure. Acetone will also decrease viscosity to allow for easier application. See table below for mixing ratios. Typically the resin: iso: acetone ratio is 1: 1: 1 by volume.
3. Protect the surfaces around the application area to prevent contamination during the installation.
4. Ensure that surfaces are ready for application of POLYPRIME before applying mixed material.
5. Ensure that the mixing station is a short distance from the application area, as pot life is relatively short.

RECOMMENDED MIXING VOLUMES

Final Volume	Mix Container	Resin	ISO	Acetone
3 qts(2.5L)	1 gal(3.8L)	1 qt(1L)	1 qt(1L)	1 qt(1L)
3 gal(9.4L)	5 gal(19L)	1 gal(3.8L)	1 gal(3.8L)	1 gal(3.0L)

MIXING AND APPLICATION

1. Add POLYPRIME resin and (optionally) acetone into an appropriate container.
2. Using a mixer or stir stick, mix material together for 15 seconds.
3. Add the isocyanate to the mixing container and mix for an additional 15 seconds or until uniform.
4. All of the resin and iso must be thoroughly mixed before application. The material may not cure properly if it is improperly mixed.
5. IMMEDIATELY apply POLYPRIME onto the surface by pouring, rolling or brushing. If material begins to gel stop and dispose of solidified material.
6. When the material is on the substrate surface, the working life is approximately 5 minutes at 70°F undiluted, but will vary with temperature.
7. Touch primed area after set time is achieved with a gloved finger, and examine the glove to see if any has transferred. Primer is ready for topcoat when material does not transfer. The primer may still be tacky at this point.
8. Material may foam where puddles form, or if it encounters moisture. This is normal. As necessary remove excess primer and foamed areas after cure by scraping or sanding.

CARTRIDGE APPLICATION

1. Use a 1-to-1 dispenser (maximum of 40 psi for pneumatic).
2. Keep the cartridge upright during assembly.
3. Remove the retaining nut and caps from the cartridge.
4. Place mix tube on cartridge nozzle and hand tighten the retaining nut over the mix tube.
5. Keeping cartridge upright load into applicator gun.
6. Begin dispensing with cartridge upright to remove any trapped air.
7. Dispense initial material (20-40mL) outside the repair area and discard.
8. Stopping more than 30 seconds can clog mix tubes. Change mix tubes if dispensing stops more than 30 seconds at 70°F (21°C).
9. Backroll the primer into porous surfaces using a 1/2" (12.5 mm) nap roller or with a disposable brush. Check for primer set before topcoat.

HEALTH AND SAFETY

Before handling, you should become familiar with the Material Safety Data Sheet (MSDS) regarding the risks and safe use of this product. To obtain an MSDS please call 800-333-9826 or send an email to: msds@wilvaco.com

WILLAMETTE VALLEY COMPANY

www.wilvaco.com
info@wilvaco.com

DIVISIONS

WESTERN DIVISION

1075 Arrowsmith Street
PO Box 2280
Eugene, OR 97402
Tel 541.484.9621
www.POLYQUIK.com
www.SPIKEFAST.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

19081- 27th Avenue
Surrey BC V3S 5T1
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 Hwy
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 011.56.41.2.928.100
www.tapel.cl



Revision Date: October 2013

DISCLAIMER OF WARRANTY

TEST RESULTS ARE TO BE CONSIDERED AS REPRESENTATIVE OF CURRENT PRODUCTION AND SHOULD NOT BE TREATED AS SPECIFICATIONS. WHILE ALL THE INFORMATION PRESENTED IN THIS DOCUMENT IS BELIEVED TO BE RELIABLE AND TO REPRESENT THE BEST AVAILABLE DATA ON THESE PRODUCTS, NO GUARANTEE, WARRANTY, OR REPRESENTATION IS MADE, INTENDED, OR IMPLIED AS TO THE CORRECTNESS OR SUFFICIENCY OF ANY INFORMATION, OR AS TO THE SUITABILITY OF ANY CHEMICAL COMPOUNDS FOR ANY PARTICULAR USE, OR THAT ANY CHEMICAL COMPOUNDS OR USE THEREOF ARE NOT SUBJECT TO A CLAIM BY A THIRD PARTY FOR INFRINGEMENT OF ANY PATENT OR OTHER INTELLECTUAL PROPERTY RIGHT. EACH USER SHOULD CONDUCT A SUFFICIENT INVESTIGATION TO ESTABLISH THE SUITABILITY OF ANY PRODUCT FOR ITS INTENDED USE. PROPER APPLICATION IS THE RESPONSIBILITY OF THE USER. AS WITH ANY PRODUCT THE USE OF THIS PRODUCT IN A GIVEN APPLICATION MUST BE TESTED (INCLUDING BUT NOT LIMITED TO FIELD TESTING) IN ADVANCE BY THE USER TO DETERMINE SUITABILITY. TESTING IS THE REQUIREMENT OF BOTH ENGINEERS AND CONTRACTORS ALIKE. WVCO DOES NOT WARRANT THE APPLICATION UNDER ANY OR ALL CIRCUMSTANCES.