

**Technical  
Data Sheet**



**W V C O**

Willamette Valley Company

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Partnering through service,  
innovation, and integrity

# POLYQuik® P-540

## Color Stable Aliphatic Polyurea Coating

### DESCRIPTION

POLYQuik® P-540 is a two-component aliphatic coating specifically designed as a floor coating and topcoat for spray elastomer coatings. It has excellent outdoor weathering characteristics and outstanding impact and abrasion resistance. It cures quickly for rapid return-to-service and for same day application of multiple coats. POLYQuik® P-540 can be applied by roller, brush or spray.

### WHERE TO USE

- **Floor Coating**—smooth or aggregate-filled
- **Topcoat**—apply for color stability
- **Protective Coating**—concrete, wood, metal
- **Walkway Surfaces**—slip-resistant surface

### FEATURES AND BENEFITS

- **Color Stable**— excellent weathering resistance
- **Fast Cure Time**—quick return to service
- **Flexible & Tough**— absorbs impact & scratch resistant
- **Easy to Apply**—1 to 1 ratio, roller, brush, spray

### PACKAGING

- 1-gal pail (3.8 L)
- 5-gal pail (18.9 L)
- 50-gal drum (189 L)

### COLORS

Tan, Gray

\*Additional colors and packaging options may be available. Contact your WVCO representative and refer to the color palate for more information.

### YIELD

260 ft<sup>2</sup> per gal. at 6 mils  
(6.4 m<sup>2</sup> per liter at 0.15 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

<b>VOC</b> , lbs/gal (g/L), ASTM D 2369	0
<b>Viscosity</b> , cps, ASTM D 4878, resin / iso	1400 / 110
<b>Hardness</b> , Shore D, ASTM D 2240	70
<b>Service temperature</b> , ° F (° C)	-30 to 150 (-34 to 65)

### Cure Time

Surface Temp. 50% RH, ° F (° C)	Tack-Free Time, hrs	Maximum Recoat Time, hrs	Potlife (With lid on container)
20 (-7)	4	24	16 minutes
35 (2)	3		
50 (10)	2		
70 (21)	1.5	12	
90 (32)	45		

### Processing Parameters

<b>Ratio by volume</b>	1 to 1
<b>Application temp</b> , ° F (° C)	50 to 90 (10 to 32)
<b>Recommended thick.</b> , mils (mm)	6 to 12 (0.15 to 0.3)
<b>Meter equipment</b>	Plural Component
<b>Gun requirement</b>	Impingement
<b>Spray pressure</b> , psi (MPa)	1000-2000 (6.9 to 13.8)
<b>Spray temperature</b> , primary heaters and hose, °F (° C)	120 (49)

## APPLICATION

### SURFACE PREPARATION

#### WOOD

1. Store wood in a covered, dry location, and protect surface from damage and contamination.
2. For a completely uniform appearance in the finished product, fill all voids, spaces, or damaged areas prior to priming. Repair or fill areas with HPU-FILLER or other suitable filler. Contact WVCO representative for filler options and technical recommendations. Remove any excess filler by sanding until level with surrounding area.
3. Ensure wood surface is smooth and dry. Surface must have a 36-120-grit surface and less than 10% surface moisture.
4. Priming is required: Prime with POLYQuik Epoxy Primer, PolyPrime, or other suitable primer. Contact WVCO representative for primer options and technical recommendations. Refer to primer technical data sheet for application and cure time information.

#### CONCRETE

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2. The surface being coated must be fully cured (28 days minimum), structurally sound (200 psi or greater tensile strength according to ASTM D 7234), clean (ASTM D 4258), and dry (less than 5% surface moisture, ASTM E1907 and D4263).
3. The surface must have low moisture-vapor transmission (less than 3 lb/24 hr/1,000 ft<sup>2</sup>, RMA Test Method).
4. Do not apply over concrete if vapor barrier is not present or unknown.
5. Profile surface according to ICRI Guide 03732 to a minimum of CSP 3 by abrasive blasting or hydroblasting. Remove contaminants before blasting.
6. Fill all voids and cracks between 0.06-0.50" (1.5-12.5mm) with HPU-FILLER or other suitable filler to ensure floor is level to appropriate elevation. Contact WVCO representative for filler options and recommendations.
7. To achieve a smooth floor, apply a level coat of Epoxy Primer, then topcoat with P-540. Follow the appropriate recoat guidelines when applying P-540 as a topcoat.

#### COATINGS

1. Spray elastomer coating must be less than 12 hours old for POLYQuik® P-540 to adhere without preparing the coating surface.
2. If 12 hours have passed since the spray elastomer coating application, mechanically abrade surface and clean with Acetone or POLYQuik® Gun Cleaner.
3. Allow cleaned surface to dry and immediately apply POLYQuik® P-540.

#### STEEL & OTHER METALS

1. Steel and metal surfaces must be cleaned before blasting according to SSPC-SP1. Remove any sharp edges and other surface imperfections.
2. Blast 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/cm<sup>2</sup> is detected.
4. PRIMING STEEL OR OTHER METALS – Apply POLYQuik® Epoxy Primer or PolyPrime only if metal surface temperature is 5° F (3°C) above the dew point to avoid application over damp surface. Refer to primer technical data sheet for application and cure time information. Other primers may also be used. Do not use without contacting your WVCO Representative for approval.
5. For aluminum and galvanized metals, contact your WVCO Representative for additional information.

#### PROCESSING

1. Condition resin and iso to approximately 70°F (21°C) for 24 hours before using.

2. Use a drill fitted with a blade approximately 1/3 the diameter of the container to redistribute any settled material.
3. Use a clean mixing blade and mechanical mixer and mix the resin in its original container for 2-3 minutes at 400-500 RPM. Scrape bottom and sides of container and mix for an additional 60 seconds.
4. Repeat above mixing instructions after every 4 hours of operation.
5. Protect surrounding surfaces of the application area. Protect substrate from direct sunlight to prevent sudden changes in substrate temperatures.

#### APPLICATION

1. Ensure surface is primed according to Surface Preparation guidelines.
2. Avoid blisters and poor adhesion by not applying coating when the humidity is above 85%. Apply the coating when the substrate temperature is stable or dropping. Minimize out-gassing and pinholes on porous substrates by properly applying primers.
3. Add the iso component into resin container. Combine the entire quantity of the kit and do not mix smaller volumes. Only mix the amount of kits that can easily be applied within 15 minutes.
4. Mix for 60 seconds. Scrape the sides and bottom of the bucket with a wooden straight edge and continue to mix for an additional 60 seconds. All of the isocyanate must be thoroughly incorporated in the resin before adding it to the application area. THE MATERIAL WILL NOT SET IF IT IS IMPROPERLY MIXED. Signs of poor mixing include dark swirls and tacky material that does not harden.
5. Keep lid on the mixing container while product is not being used.
6. Pour material onto substrate surface. Do not turn bucket over and allow to drain. Do not scrape last remaining material out of bucket.

*NOTE: Other techniques and methods can be used. It is the responsibility of the applicator to determine suitability and work flow.*

#### SQUEEGEE AND BACKROLL

1. Pour POLYQuik® P-540 in a long line and follow with a 1/8" serrated squeegee
2. Use ¼" nap mohair roller (9" or 18" wide) to back roll.
3. Back roll perpendicular to squeegee line to remove puddles.
4. POLYQuik® P-540 thickness should be 6 mils and no more than a maximum of 12 mils thick. Use a Wet-Mil gauge to check the thickness of the product. After product cures, remove any blisters that rise out of concrete pores.
5. Apply next coat only after the basecoat is hard and tack-free. Refer to recoat schedule.

#### PLURAL-COMPONENT

1. Use a plural-component pump that will generate at least 1000 PSI and 120°F.
2. Set Resin primary heater to 120°F (49°C) and turn OFF iso primary heater. Set spray pressure between 1000-2000 PSI. Use a low output spray gun.
3. Spray product in a crosshatch manner to assure fully coverage.

#### FOR SLIP-RESISTANCE

1. Spread POLYQuik® Epoxy Primer over the concrete surface with a 1/8" serrated squeegee and back roll until the product is spread evenly. Cover the area with desired-mesh sand till refusal (contact WVCO representative for sand information). Allow the product to cure 12-24 hours and remove excess sand. Spread POLYQuik® P-540 with a flat squeegee and back roll. Repeat as necessary.
2. POLYQuik® P-540 thickness should be 6 mils and no more than a maximum of 12 mils thick. Use a Wet-Mil gauge to check the thickness of the product. After product cures, remove any blisters that rise out of concrete pores.
3. Another method is to IMMEDIATELY and UNIFORMLY broadcast sand into the wet POLYQuik® P-540 and back roll.

#### CLEANING & MAINTENANCE

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

## 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](mailto:msds@wilvaco.com)

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