

Technical Data Sheet



Willamette Valley Company
www.wilvaco.com
800.333.9826

Partnering through service,
innovation, and integrity

POLYQuik® P-690

Color Stable Aliphatic Polyurea Coating

DESCRIPTION

POLYQuik® P-690 is a two-component aliphatic polyurea specifically designed as a floor coating. 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-690 can be applied by roller or brush.

WHERE TO USE

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

FEATURES AND BENEFITS

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

PACKAGING

- 4-gal kits (15.1 L)
- 5-gal pail (18.9 L)
- 50-gal drum (189 L)

COLORS

- Gray, White
- Yellow, Blue
- Green, Orange
- Black

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

YIELD

- 260 ft² per gal. at 6 mils
- (6.4 m² per liter at 0.15 mm)

SHELF LIFE

6 months when properly stored.

STORAGE

Store and ship in a clean, dry, low-humidity, shaded or covered environment at 60-90°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	280 / 140
Hardness , Shore D, ASTM D 2240	70
Service temperature , ° F (° C)	-30 to 150 (-34 to 65)

Chemical Resistance (Recommended, Not recommended, Conditional)		
Chemical	Splash & Spill (less than 2 hours)	Long Term Exposure
Diesel	R	R
Water	R	R
Acetone	C	NR
Saturated Caustic	R	R
12% Sod. Hypochlorite	R	R
10% Sulfuric Acid	R	NR

Processing Parameters	
Ratio by volume , resin to iso	2 to 1
Application temp. , °F (°C)	50 to 90 (10 to 32)
Recommended thickness , mils (mm)	6 to 12 (0.15 to 0.3)

Cure Time

Surface Temp. 50% RH, °F (°C)	Minimum Recoat Time, hours	Maximum Recoat Time, hours	Potlife (with lid on mixing container)
32 (0)	8	36	30 minutes
50 (10)	5	24	
77 (21)	2	24	
100 (38)	1	24	

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

1. 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.
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 ft², 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-690. Follow the appropriate recoat guidelines when applying P-690 as a topcoat.

COATINGS

1. Spray elastomer coating must be less than 12 hours old for POLYQuik® P-690 to adhere without preparing the coating surface.
2. If more than 12 hours have passed since the spray elastomer coating application, mechanically abrade surface and clean with acetone or POLYQuik® Cleaner.
3. Allow cleaned surface to dry and apply POLYQuik® P-690 within 1 hour.

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/cm² 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 material that can easily be applied within 15 minutes. Do not dilute with solvent.
4. Mix for 60 seconds. Scrape the sides and bottom of the bucket with a straight edge and continue to mix for an additional 60 seconds. All of the isocyanate must be thoroughly incorporated into the resin before application. 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 material to drain, or scrape last remaining material out of bucket, in case unmixed material remains on the bottom or sides.

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-690 in a long line and follow with a 1/8" serrated squeegee
2. Use 3/4" nap mohair roller (9" or 18" wide) to back roll.
3. Back roll perpendicular to squeegee line to remove puddles.
4. POLYQuik® P-690 thickness should be 6 mils minimum and 12 mils maximum wet film thickness. Use a wet film 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 for cure window.

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 to refusal (contact WVCO representative for sand information). Allow the product to cure 12-24 hours and remove excess sand. Spread POLYQuik® P-690 with a flat squeegee and back roll.
2. POLYQuik® P-690 thickness should be 6 mils minimum and 12 mils maximum wet film thickness. Use a wet film gauge to check the thickness of the product. After product cures, remove any blisters that rise out of concrete pores. Recoat if desired.
3. An alternate method is to IMMEDIATELY and UNIFORMLY broadcast sand into the wet POLYQuik® P-690 and back roll.

CLEANING & MAINTENANCE

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

NOTE: Proper application is the responsibility of the user. Field visits by WVCO Representative are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

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 Sept. 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.