

Technical Data Sheet



Willamette Valley Company

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Partnering through service,
innovation, and integrity

POLYQuik® P-700

Extended Set Polyurea Coating with Excellent Overcoat Adhesion

DESCRIPTION

POLYQuik® P-700 is a two-component, aromatic, sprayable pure polyurea elastomeric coating. It is used as a highly elastic, waterproof protective coating for both vertical and horizontal surfaces. It is specially formulated for excellent overcoat adhesion to geotextiles and old coatings with minimal surface preparation. Use POLYQuik® P-700 where regular dynamic movement is expected. POLYQuik® P-700 can receive a broadcast of aggregate for slip resistance on horizontal surfaces.

WHERE TO USE

- **Parking Decks & Ramps**—for traffic surfaces
- **Waterproofing**—interior or exterior, with or without geotextile matrix
- **Abrasion Resistant Coating**—for floors & tanks
- **Protective Coating**—for concrete, metal

FEATURES AND BENEFITS

- **Superior Elongation**—excellent crack-bridging ability
- **Overcoat Adhesion**—excellent bond to existing spray elastomer with minimal preparation
- **Serviceable Within 2 Hours**—fast turn-around time
- **Excellent Chemical Resistance**
- **USDA Approved**—non-toxic, zero VOC, low odor

PACKAGING

5-gal. pails (18.9 L)
50-gal. drums (189 L)

COLORS

Gray

YIELD

5-gallon pail set (10 gal total) = 1.34 ft³
50-gallon drum set (100 gal total) = 13.36 ft³

Sprayed Yield*: 26 ft² per gal or 3.8 gal per 100 ft²
at 60 mil DFT (0.63 m² per L at 1.5 mm DFT)

*assumes 100% transfer

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	600 /1100
Service temperature , ° F (° C)	-26 to 190 (-32 to 88)
Gel time , sec	8
Tack-free time , sec	30
Recoat time , hours	> 24
Tensile ,* psi (MPa), ASTM D 412	3,000 (20)
Elongation ,* %, ASTM D 412	700
Hardness ,* Shore A/D, ASTM D2240	85A/33D
Tear ,* pli (kN/m), ASTM D 1938	225 (39)
Tear, (Die C)* pli (kN/m), ASTM D 624	375 (65)
Abrasion Resistance* mg lost, H-18 wheel, 1kg, 1k cycles, ASTM D 4060	250
Peel Adhesion, Overcoat After 24 h Cure* pli (kN/m), ASTM D 903	> 20 (3.5)

*Properties achieved using specific dispensing equipment – Contact WVCO for more information.

Chemical Resistance

Chemical	Splash & Spill (Less than 2 hrs.)	Long Term Exposure
Diesel	R	R
Xylene	C	NR
Acetone	C	NR
Sat. Caustic	R	R
12% Sod. Hypochlorite	R	R
10% Sulfuric Acid	R	R
10% Acetic Acid	R	R
10% Propylene Glycol	R	R

R=Recommended; NR=Not recommended; C=Conditional

Processing Parameters

Ratio by volume	1 to 1
Application temp , °F (°C)	40 to 110 (4.4 to 43)
Recommended thick. , mils (mm)	20 to 125 (0.5 to 3.0)
Meter equipment	Heated Plural Component (30 Mesh Y-Strainer)
Gun requirement	Impingement spray gun (40 Mesh Screens)
Spray pressure , psi (MPa)	2,000 to 3,000 (13.6 to 20.4)
Spray temperature , °F (°C)	140 to 180 (60 to 82)

APPLICATION

SURFACE PREPARATION

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/1000 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" (1.5-12.5 mm) with POLYQuik[®] HPU Filler or other suitable filler. Contact WVCO representative for filler options and technical recommendations.

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. 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 3 mg/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.

GEOTEXTILE SURFACES

1. P-700 is applied to the heat treated side of non-woven polypropylene geotextiles. Choose the geotextile weight based on application. Speak to a WVCO Representative before using other types of geotextiles. Protect geotextile surfaces from damage before applying coating. Minimize wrinkles when laying out geotextile.
2. Apply coating over entire geotextile before adhering it to perimeter surfaces. Use the coating to bond geotextile to perimeter surface after the entire area has cured for 60 minutes, or else bury the coated geotextile in a trench surrounding the application area.
3. Recommended geotextiles include: GEOTEX 1201 and GEOTEX 2x2HF (spray P-700 on the black side).

PROCESSING

PLURAL COMPONENT METER

1. Precondition material to at least 70°F (21°C) for 24 hours. Secure an air driven mixer with 3 folding blades in the center bung hole of the drum. Air driven mixer blade configuration: 8" blade - bottom, 6" blade - middle, and 6" blade - top. Ensure the mixer is spinning clockwise at a speed adequate enough to thoroughly mix the resin. Mix for 30 minutes before spraying. Repeat above mixing instructions after every 4 hours of operation. Avoid mixing for more than 30 minutes as air may become entrapped in the resin. Mixers are available through WVCO Precision Technologies.
2. P-700 must be sprayed with a high pressure plural-component proportioner. Contact WVCO representative for plural component proportioner recommendations and configurations. Proportioner should be able to heat resin and iso to 150-180°F (65-82°C).
3. 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 between resin and iso – no more than 300 psi – during application.
4. Contact WVCO representative for high and low output application equipment. Equivalent applicator setups from other manufacturers are available. CAUTION: APPLICATOR OUTPUT MUST NOT EXCEED 75% OF METER OUTPUT.

APPLICATION

1. When priming, prime according to Surface Preparation guidelines. Refer to primer technical data sheet for application and cure time information.
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 concrete with primers, and with multiple thin applications of coating (10 mils or less per pass).
3. Clean surface of contaminants (i.e. dust, dirt). Surface may be blown with dry compressed air or tack cloth.
4. Spray P-700 in a consistent sweeping pattern, 15-20 mils per pass as a general guideline and maintaining a consistent distance from the substrate. ALWAYS START AND STOP SPRAYING OFF TARGET TO AVOID BLISTERING.
5. Recoat without surface preparation is possible as long as the surface is clean and dry. P-700 will adhere to most spray elastomer surfaces, including itself, regardless of age with no need for abrading or priming. Delaminated or damaged areas must be repaired before coating. A test spray is recommended on surfaces of unknown composition or age.
6. For color stability, aliphatic topcoats may be used. Contact WVCO representative for options and technical recommendations.

CLEANING & MAINTENANCE

- Use POLYQuik[®] Cleaner to clean parts after every use. Do not immerse the equipment in Cleaner.
- CLEAN Y-STRAINERS REGULARLY.
- Contact WVCO representative for pump flushing and long term storage stability recommendations.

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.

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