Technical

Data Sheet

Willamette Valley Company

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Partnering through service, innovation, and integrity

POLYQuik® HPU-1734

Fast-setting Polyurea-Polyurethane Coating

DESCRIPTION

POLYQuik® HPU-1734 is a two-component, 100% solids, aromatic spray elastomer, which cures quickly to create a monolithic coating. It has excellent abrasion resistance, and adhesion to wood, EPS (Styrofoam®), concrete, and metal. It can be applied under a wide range of climate conditions, and has excellent resistance to blistering under high humidity conditions.

WHERE TO USE

- **Protective Coating**–for concrete, wood, EPS, & metal
- **Reinforcing Substrate**–increase surface strength
- **OEM**–protection of metal or soft substrates
- **Abrasion Resistant Coating**–trucks, trailers, & boats

FEATURES AND BENEFITS

- **Flexible & tough**–absorbs impact & movement
- **Two-component cure**–sets in seconds
- **Chemical & abrasion resistant**–extends service life
- **Excellent adhesion**–bonds to many surfaces

PACKAGING

100 gallon (379 L) kits

COLORS

Black, Gray, Tan

YIELD

26 sq.ft per gal. at 60 mils or 3.8 gal. per 100 sq.ft. (0.63 sq.m. per liter at 1.5mm)

SHELF LIFE

1 year(s) 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, Part A / Part B	660 / 2900
Service temperature, ° F (° C)	-26 to 176 (-32 to 80)
Gel time, sec	6
Tack-free time, sec	20
Recoat time, hours	8
Tensile, psi (MPa), ASTM D 412	3,300 (23)
Elongation, %, ASTM D 412	52
Hardness, Shore D, ASTM D 2240	75
Tear, pli (kN/m), ASTM D 1938	171 (25)
Tear (Die C), pli (kN/m), ASTM D 624	482 (85)
Abrasion resistance, mg lost; H18 wheel, 1 kg, 1 k cycles, ASTM D 4060	300

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)	35 to 110 (2 to 43)
Recommended thick., mils (mm)	20 to 125 (0.5 to 3.0)
Meter equipment	Heated Plural Component(30 Mesh Y-Strainer Screens)
Gun requirement	Impingement spray gun (40 Mesh Screens)
Spray pressure, psi (MPa)	2,000 to 3,000 (13.6 to 20.4)
Spray temperature, primary heaters and hose, °F (° C)	130 to 150 (55 to 65)

APPLICATION

SURFACE PREPARATION

WOOD

1. Store wood in a covered, dry location, and protect surface from damage and contamination.
2. Recommended Thickness for different types of wood:

- Plywood & Particle Board 60-80 mils
- Medium Density Fiber (MDF) 40-60 mils

3. For a completely uniform appearance in the finished product, fill all voids, spaces, or damaged areas prior to coating. Repair or fill areas with POLYQuik® HPU-FILLER, and evenly spread over surface. Remove any excess by sanding until level with surrounding area.
4. Ensure wood surface is smooth and dry prior to applying POLYQuik® HPU-1734. Surface must have at least a 240-grit surface and less than 10% surface moisture. Humidity levels greater than 85% and surface moisture greater than 10% will create blisters between the coating and wood surface.
5. Apply POLYQuik® HPU-1734 4-6 feet from the surface in two 15-20 mils (0.3-0.5 mm) coats in opposite directions and allow to cure for 2-3 minutes. Repeat this application method until minimum thickness is achieved.
6. Apply a texture coat over the surface to create a uniform appearance.

CONCRETE

1. The surface being coated must be fully cured 28 days, structurally sound (200 psi or greater according to ASTM D 4541), clean (ASTM D 4258), and dry (less than 5% surface moisture, ASTM D 4263).
2. The surface must have low moisture-vapor transmission (less than 3 lb/24 hr/1,000 ft2, RMA Test Method).
3. Profile surface according to ICRI Guide 03732 to a minimum of CSP 3 by abrasive blasting or hydroblasting. Remove contaminants before blasting.
4. Fill all voids and cracks between 0.06-0.50" (1.5-12.5mm) with POLYQuik® HPU-FILLER.

STEEL & OTHER METALS

1. Steel surfaces must be cleaned before blasting (SSPC-SP1). Remove any sharp edges and other surface imperfections
2. Dry abrasive blast surface according to SSPCSP-10/NACE No. 2 (0.003" profile).
3. Remove any non-visible soluble salt contamination (less than 3 mg/cm2, NACE 6G186, CHLOR*RID).
4. Apply POLYQuik® primer and coating only if steel surface temperature is 5° F above the dew point to avoid application over damp surface.
5. Apply POLYQuik® primer and coating within the same day and before the prepared steel surface is chemically contaminated and before rusting reoccurs.
6. For aluminum and galvanized metals, contact your WVCO Representative for additional information.

PROCESSING

1. Precondition material to at least 70° F (21° C) 24 hours and thoroughly mix Part B for at least 30 minutes before proportioning begins. Use a mixer fitted with blades that are 1/3 the diameter of the container to redistribute any settled material.
2. POLYQuik® HPU-1734 must be sprayed with a plural-component GRACO H20/35, REACTOR™ E-XP2, or equivalent proportioner. Proportioner should be able to heat Part A and Part B to 130–150°F (55–65°C).
3. Proportioner must generate a minimum spray pressure of 2,000 psi (13.8 MPa) and maintain a stable pressure differential between Part A and Part B during application.
4. For high output applications, use a GRACO Fusion AP AR4242, GX7-400 with a 453 modules & 212PCD. For moderate-to-low output applications use Fusion AW3333/AW3939 (40-mesh screen) or GX-8 (60-mesh screen) gun. CAUTION: SPRAY GUN OUTPUT MUST NOT EXCEED 75% OF PROPORTIONER OUTPUT. Contact your WVCO Representative for additional information on equipment.

APPLICATION

1. Priming is required. Use POLYQuik® PolyPrime or POLYQuik® Epoxy Primer. Refer to primer technical data sheet for application and cure time information.
2. Wear protective gloves, safety glasses, respirators, and clothing while handling POLYQuik® HPU-1734. Make certain the most current versions of product data sheet and MSDS are being used.
3. Avoid blisters and poor adhesion by not applying coating when the temperature is within 5° F of the dewpoint or the humidity is above 85%. Apply the coating when the substrate temperature is stable or dropping. Minimize outgassing and pinholes with primers, multiple thin applications of coating (less than 0.010" per coating layer).
4. POLYQuik® HPU-1734 color will discolor or fade under UV light; however physical and performance properties will not be affected. For color stability, use POLYQuik® P-540 as a topcoat.
5. Spray POLYQuik® HPU-1734 in a consistent sweeping pattern 15 to 20 mils per pass and maintaining a consistent distance from the substrate. ALWAYS START/STOP SPRAYING OFF TARGET, OTHERWISE BLISTERS MAY FORM.
6. Recoat within 12 hours of application at 70° F (21° C). After 12 hours, mechanically abrade the surface and clean it with acetone or POLYQuik® Gun Cleaner before reapplying within 1 hour.
7. 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.

CLEANING & MAINTENANCE

- Use POLYQuik® Cleaner to clean guns and parts after every use. Do not immerse gun in Gun Cleaner.
- CLEAN Y-STRAINERS REGULARLY. INSPECT Throat Seal Liquid (TSL) DAILY & REPLACE EVERY MONTH.
- Flush the metering equipment with POLYQuik® Pump Lube and replace Pump Lube when cloudy.
- Repair small damaged areas of POLYQuik® HPU-1734 with POLYQuik® HPU-FILLER.

HEALTH AND SAFETY

Willamette Valley Company recommends reading and becoming familiar with the MSDS before using this product.

DISCLAIMER OF WARRANTY

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