

Technical Data Sheet



W V C O

Willamette Valley Company

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Partnering through service,
innovation, and integrity

POLYQuik[®] Mortar

Fast-Setting Cementitious Polyurethane

DESCRIPTION

POLYQuik[®] Mortar is a three-component, easy-to-trowel cementitious polyurethane designed for use as a high performance floor coating. It is rigid with a high compression strength, solvent resistance, and thermal shock resistance. POLYQuik[®] Mortar is used to create a coating from 1/8" to 3/8" thick on concrete floors.

WHERE TO USE

- Concrete Floors
- Commercial Kitchens
- Dairy Plants
- Brewery or Winery
- Restaurants
- Walk-thru autoclaves, etc.

FEATURES AND BENEFITS

- **Rapid Gel Time**– reduces return-to-service time
- **No VOCs**– very low odor
- **Excellent Chemical Resistance**–protects concrete
- **Outstanding Abrasion Resistance**– long lasting
- **Thermal Shock Resistant**– clean with hot steam

PACKAGING

Kit includes 40 lb bags (84kg) with 2 -1 gallon (2-3.78L) containers

COLORS

Gray, Red & Tan

YIELD

Floor Thickness: 1/8 in. or 3.2 mm = 49.5 ft² or 4.6 m²
 1/4 in. or 6.4 mm = 24.7 ft² or 2.3 m²
 3/8 in. or 9.5 mm = 16.5 ft² or 1.5 m²

SHELF LIFE

2 years when properly stored.

STORAGE

Store and ship this product in a clean, dry, low-humidity, shaded or covered environment at 50° to 90° F (10° to 32° C).

TECHNICAL INFORMATION

Typical Properties

VOC , lbs/gal (g/L), ASTM D 2369	0
Viscosity , cps, ASTM D 4878, Mixed	10,420
Density, mixed , lbs/gal	15.06
Service temperature , °F (°C)	-40 to 220 (-40 to 105)
Gel time , min	25
Coefficient of Thermal Expansion , ASTM C 531	3.2E ⁻⁵ in/in/°F
Hardness , Shore D, ASTM 2240	75-80
Return to service , hrs, 70°F (20°C)	6-8
Volume Resistivity , Ω·cm	4.1×10 ¹³
Compressive Strength , psi, ASTM C-579	6,274
Concrete adhesion , psi (MPa), ASTM D 7234 Mode of Failure, Substrate: concrete	772 (5.32) 100% subst.
Abrasive Resistance , mg lost; H18, 1kg, 1k cycles, ASTM C 957	952

Chemical Resistance

Chemical	Result
Water	No Change (NC)
Coffee	NC
Diesel	NC
HCL (37%)	Slight yellowing
Oil	NC
NaOH (0.83 M)	NC
Ethanol	NC
Acetic Acid (3%)	Slight bleaching
Dish Soap	NC
Acetone	NC

Processing Parameters

Ratio:	Use entire kit. Do not divide.
Application temp. , °F(°C)	45 to 85 (7 to 29)
Equipment	Mechanical mixer, gage rake, trowel

APPLICATION

SURFACE PREPARATION

CONCRETE

1. Concrete should be cured 28 days; for applications on concrete cured less than 28 days seek manufacturer's approval. Concrete must have surface moisture content below 10% (ASTM E 1907), below 12 lbs. per 1000 square feet in a 2 hour period using Calcium Chloride method (ASTM F1869), and less than 92% relative humidity using in situ probe (ASTM F2170).
2. Flooring surfaces must be sound, dry, clean, free of dirt, moisture, loose particles, oil, grease, asphalt, tar, paint, wax, rust, waterproofing and curing or parting compounds, membranes, and other foreign matter (Refer to NACE No. 6/SSPC 13).
3. Clean concrete by abrasive blasting to remove contaminations and laitance while profiling the surface to CSP 4-6 (Refer to ICRI Guide 03732).
4. Cut a "key in" around perimeter of floor (3/16" deep and 3/16" wide and 6" from perimeter).
5. Grind any high points and fill any voids with FastPatch. Repeat the above surface preparation steps for all repaired areas.

OTHER SURFACES

1. Remove all old coating material by mechanical means.
2. If sides of floor have absorbed oils, cut away sufficient concrete to ensure a clean, fresh surface.
3. Do not prepare or apply over asphalt, metal, or wood.

INSTALLATION

FLOOR DESIGN

1. Optimum ambient temperature range for application is 45°F-85°F. If temperature is outside of this ideal range, temperature should be adjusted with heaters or air conditioners. Substrate temperature should be $\geq 5^{\circ}\text{F}$ above the dew point.
2. If desired, a cove base should be installed prior to the floor according to the proper specifications for the coving material.
3. DO NOT Featheredge. Anchor free edges by placing a key way in the base concrete and at least 6" from edge.
4. Expansion joints need to be honored at all times. Create joints between dissimilar materials, around load-bearing columns, and to separate areas subjected to extreme thermal or mechanical stresses. After POLYQuik® Mortar is cured, honor these joints by sawcutting and filling with POLYQuik® CJS.
5. Moving control joints or cracks must be honored and properly prepared. Applying POLYQuik® Mortar over properly prepared and filled joints or cracks can result in the finished floor.

PRIMING

1. For most applications, priming is not required. If priming is required, contact your WVCO Representative for priming instructions.

MIXING

1. DO NOT mix by hand. Use a mechanical mixer with a dispersing blade (no spiral blades) between 800-1000 RPM. Only mix full kits.
2. Thoroughly premix pigment, Part A, & B with a drill and paddle or concrete mixer until a uniform color is achieved.
3. Slowly add the bag of solids and scrape container sides while mixing and ensure all solids are wetted out.
4. Apply to floor immediately by pouring over the surface. Do not completely empty mixing container on floor by leaving container upside down and do not scraping the container to remove all of the material.

APPLICATION

1. POLYQuik® Mortar should only be applied by trained professionals.
2. Immediately spread mixed material on substrate in a ribbon line then $\frac{1}{2}$ " gage rake or $\frac{1}{2}$ " notched squeegee and trowel the material in one direction to the desired thickness. Excess raking or troweling will cause smooth areas, a resin rich surface, and other surface defects.
3. If necessary, immediately back roll with a loop and spike roller to remove trapped air. Do not walk on finished floor with spike shoes to avoid creating pinholes. Do not use power trowels, power floats, serrated hand trowels, or screed boxes. Apply more material within 15 minutes to create a continuous, seamless floor.
4. If required, evenly apply aggregate to surface within 15 minutes of application and at 1lb per square foot.
5. Allow to cure 8 hrs (@ 72°F) prior to foot traffic or sweeping aggregate and 16 hrs prior to wheel traffic.
6. If required, topcoat with POLYQuik® P-690/695 after a minimum of 48 hours after application following POLYQuik® P-690/695 technical data sheet instructions.
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

Wash tools with acetone or POLYQuik® Cleaner immediately after use. Observe all precautions when handling these solvents. Cured material must be removed mechanically.

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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