Technical

Data Sheet

WVCO

Willamette Valley Company

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Partnering through service, innovation, and integrity

PolyPrime Epoxy Primer

Fast-setting Primer for Concrete and Steel Substrates

DESCRIPTION

PolyPrime Epoxy Primer is a two-component low-viscosity 100% solids (0 VOC) epoxy primer for concrete and steel surfaces. It is designed to enhance the adhesion between substrates, topcoats and to seal porous substrates to prevent pinholes in topcoats.

WHERE TO USE

- **Walls & Floors**–concrete and steel
- **Under Coatings**–polyurea, polyurethane, epoxy
- **Porous Substrates**–prepared concrete
- **Moisture Insensitive**–will not react with water

FEATURES AND BENEFITS

- **Superior Adhesion**–steel and concrete
- **Two-Component**–100% solids, zero VOC, safe to use
- **Solvent-free**–no odor
- **Minimizes Pinholes**–seals surface and promotes adhesion

PACKAGING

3-Gallon (11L) kits

COLORS

Clear Pale Yellow

YIELD

140 sq.ft. per gallon at 10 mils
(3.5 sq. m. per liter at 0.25 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

VOC, lbs/gal (g/L), ASTM D 2369	0
Viscosity, cps, ASTM D 4878, mixed	500-800
Service temperature, ° F (° C)	-22 to 135 (-30 to 57)
Potlife, min.	17
Ready for topcoat, hr.	2 -12 (see Cure Time chart)
Concrete adhesion, psi (MPa), ASTM D 4541	700 (4.7) 100% substrate
Adhesion to steel, lbf/in (N/m), ASTM D 903	55 (6.2)

Cure Time

Temperature, 50% RH	Ready for topcoat, hrs	Maximum recoat time, hrs
25°F (-4°C)	12	24
70° F (21° C)	5	24
104° F (40° C)	2	24

Processing Parameters

Ratio by volume	2 to 1 (Resin to Hardener)
Application temp, ° F (° C)	50 to 90 (10 to 32)
Recommended thick., mils (mm)	5-10 (0.12 - 0.25)

APPLICATION

SURFACE PREPARATION

CONCRETE

1. The concrete surface being repaired must be fully cured 28 days, structurally sound (200psi or greater according to ASTM D7234), clean (ASTM D4258), and dry (less than 5%, ASTM E1907).
2. Concrete surface must be dry and clean. Water or oil present can result in poor adhesion. Apply product only if surface temperature is 5° F (3° C) above dew point to avoid application over damp surface.
3. Remove any contaminants before profiling surface.
4. It is recommended to profile surface according to ICRI Guide 03732 to a minimum of CSP 3 by abrasive blasting.
5. The surface must have low moisture vapor transmission (less than 3 lb/24 hr/1000 ft^2, RMA Test Method).
6. Use a minimum 120 PSI continuously dry compressed air to blow out loose debris, dirt and dust prior to applying product. Moist concrete can be torched dry. If moisture returns immediately after torching, stop and do not install PolyPrime Epoxy Primer in this area.
7. Use a steel bristle brush to remove dirt on vertical and horizontal concrete surfaces and use compressed air to blow out prior to applying product.
8. Fill all voids and cracks between 0.06-0.50" (1.5-12.5 mm) with POLYQuik® HPU Filler or other suitable filler. Contact your WVCO representative for filler options and technical recommendations.
9. Epoxy Primer is not recommended for use on asphaltic materials, bare ground, dirt, grass or other non-structural surfaces. Contact your WVCO representative for recommendations, and before using on surfaces intended for immersion service.

STEEL & OTHER MATERIALS

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. Dry abrasive blast the surface 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^2 is detected.
4. Apply Epoxy Primer only if metal surface temperature is 5° F (3°C) above the dew point to avoid application over damp surface. Apply primer within the same day of blasting, before the prepared metal surface is chemically contaminated and before flash rusting or oxidation reoccurs.
5. For aluminum and galvanized metals, and before using on surfaces intended for immersion service, contact your WVCO representative for additional information.

PROCESSING

1. Precondition the containers between 70°F (21°C) for 24 hours before using. Choose a work area that is shaded and away from direct sunlight.
2. Hardener must be mixed in its original container before combining with Resin. Attach a clean mixing blade approximately 1/3 the diameter of mixing container to a drill. Use acetone to clean the blade. Do not use isopropyl alcohol or any other alcohol-based products. Slowly mix Hardener for 2 to 3 minutes using a mixer or stir stick.

RECOMMENDED MIX VOLUMES			
Final Volume	Mixing Container	Resin	Hardener
3/4 gal (3L)	1 gal (4L)	2 qts (2L)	1 qt (1L)
3 gal (12L)	5 gal (20L)	2 gal (8L)	1 gal (4L)

3. Use marked containers to measure exact volumes of Resin and Hardener or use full kits. Choose a final volume that can be easily applied within 10 minutes.
4. Mixing containers must be clean and dry. Do not use containers contaminated with water or other liquids.
5. Measure volumes of Resin and Hardener in separate containers. NOTE: MEASURE CAREFULLY, THE MIX RATIO IS CRITICAL.
6. Pour the pre-measured volumes of 2 parts Resin and 1 part Hardener into the appropriate mixing container.
7. Mix for 2-3 minutes, then scrape the sides and bottom of the container with a wooden straight edge and continue to mix for an additional 20 seconds. PROPER MIXING IS CRITICAL FOR GOOD PERFORMANCE. Signs of poor mixing include streaks or swirls, and tacky material that will not harden after application.
8. APPLY PRIMER AS IS AND DO NOT THIN WITH SOLVENT. USE IMMEDIATELY AFTER MIXING AS POT LIFE IS SHORT.
9. Keep mixing container covered while primer is not being used.

APPLICATION

1. Before priming, protect the surfaces around the application area with tape or other kinds of protective barriers to prevent contamination during the installation.
2. Begin priming only if the primer and topcoat can be applied before exposure to rain or the formation of dew.
3. Concrete is a porous material that contains air. When the temperature of the concrete rises, the air expands. This phenomenon, outgassing, may produce pinholes or blisters in primers and topcoat systems. To reduce the risk of pinholes from outgassing, apply PolyPrime Epoxy Primer and topcoat when the concrete temperature is stable or dropping.

BRUSH, ROLLER, OR SQUEEGEE

1. This method is recommended for joints, detail priming, or large flat areas. Use a brush small enough to reach into joint faces. For convenience, brushes can be attached to an extension rod.
2. Use a 1/8" (3 mm) nap roller, ensuring no puddles while applying primer. Apply primer in multiple directions to ensure full coverage.
3. If material begins to gel stop and dispose of solidified material.
4. Check primed surfaces for set by touching with a gloved finger, and examining the glove for transfer. If no primer transfers, the surface is ready for topcoat. The primer may still be tacky at this stage.

NOTE: Pot life of mixed material is 5 to 10 minutes, depending on temperature.

NOTE: If topcoat window time is exceeded, mechanically remove primer and re-prime area.

CLEANING & MAINTENANCE

Clean equipment with POLYQuik® Cleaner or acetone immediately after use. Cured material that has puddled, dripped or sagged must be removed mechanically.

HEALTH AND SAFETY

Before handling, you should become familiar with the Safety Data Sheet (SDS) regarding the risks and safe use of this product. To obtain an SDS please call 800-333-9826 or send an email to: msds@wilvaco.com.

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