

Rigid-Rock RR 1601

APPLIED POLYMER SOLUTIONS, LLC

PRODUCT PROFILE

GENERIC DESCRIPTION LOW TEMPERATURE (moisture insensitive) MORTAR PATCH KIT/RESURFACER. RIGID-ROCK 1601 is a three component 100% solids epoxy mortar designed for applications where water sources have continual access to repair area. The product will cure underwater at temperatures as low as 35 degrees F.

RECOMMENDED USAGE Recommended for service areas where water exposure exists and applications to damp concrete. This product can be applied to substrates where there is continual access to water to the repair area.

COLORS Natural,

CHARACTERISTICS/FINISHES

SURFACE Slight texture when unsealed

PRIMERS Self Priming for patching or overlay. RR 4002, RR 4009, RR 1601 liquids or other 100% solid epoxies are compatible for priming excessively porous substrates to prevent resin ratio reduction.

TOPCOATS/FINISHES RR 3000 Series Water-Based and Low VOC Epoxies
RR 4000 Series 100% Solids High Performance Epoxies
RR 4200 Series 100% Solids Quick Cure Epoxies
RR 3300 Series High Performance Urethanes

TECHNICAL SPECIFICATIONS

SOLIDS BY WEIGHT 100% (mixed)

THICKNESS 1/8" or greater. For applications greater than 1" thickness, clean pea gravel can be used to extend yield.

VOLATILE ORGANICS Zero pounds per gallon

MIX RATIO Part A: .84 - .86 Gallons / Part B: .28 Gallons / 50 lbs of silica aggregate (Volume and Weight Approx)

APPLICATION TEMP 20°F - 80°F (-6°C - 26°C)

Cure State	30°F (-1°C)	70°F (21°C)
Pot Life	40 minutes	20 minutes
Light Traffic/Recoat	5-6 hours	2-3 hours
Full Cure/Heavy Traffic	8-10 hours	5-7 hours

STORAGE TEMP 65°F - 85°F (18°C - 30°C) in a dry area. Avoid excessive heat and freezing.

SHELF LIFE 2 years in an unopened container

PACKAGING All kits are premeasured, ready for blending and application

Size	Cubic Feet	Coverage @ 1/8"	Coverage @ 1/4"
18 lb. kit - 2 gal. bucket	.1 cu. ft.	10 sq. ft.	5 sq. ft.
65 lb unit - 5 gal bucket	.5 cu ft.	40 - 50 sq. ft.	20 - 25 sq. ft.
370 lb. Bulk Unit	3.5 cu. ft.	250 - 300 sq. ft.	145 - 160 sq. ft.

**Liquids only packaging available*

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TECHNICAL SPECIFICATIONS (CONTINUED)

COMPRESSIVE STRENGTH 10,100 psi @ ASTM D695

FLEXURAL STRENGTH 9,922 psi @ ASTM D790

TENSILE STRENGTH 6,482 psi @ ASTM D638

BOND STRENGTH 420 psi (concrete failure)

IMPACT RESISTANCE Excellent

ABRASION RESISTANCE Excellent

ULTIMATE ELONGATION 2.1%

HEAT DEFLECTION TEMP 162°F @ ASTM D648

VISCOSITY 2200-3000 cps (mixed)

WEATHERING Good (chalks)

CHEMICAL RESISTANCE

Ammonia	C	Sodium Hydroxide 50%	C
Citric Acid	A	Sulfuric Acid 10%	C
Corn Oil	B	HCl (aq) 10%	C
Lactic Acid	C	Nitric Acid 30%	A
Salt Brine	C	Phosphoric Acid 40%	A
Gasoline	C	Sodium Hypochlorite 3-5%	A
Motor Oil	C	MEK	A
Skydrol	B	Mineral Spirits	B

Rating key: A - not recommended, B - 2 hour term splash spill, C - 8 hour term splash spill, D - 72 hour immersion, E - long term immersion. NOTE: extensive chemical resistance information is available through your sales representative.

SURFACE PREPARATION

SURFACE All dirt, oil, dust, foreign contaminants and laitance must be removed to assure a trouble free bond to the substrate.

MOISTURE Allow concrete to cure for 28 to 45 days. Verify dryness by testing for moisture with a "plastic film" test; this can be done at room temperature by placing a 4' x 4' plastic sheet on the substrate and taping down the edges. If after 24 hours, the substrate is still dry below the plastic sheet, then the substrate is dry enough to start coating. Should moisture be present, perform Moisture Vapor Emission Rate testing using Anhydrous Calcium Chloride (ASTM F1869). Moisture content should not be in excess of 3 lbs. per 1,000 sq. ft. for coatings (5 lbs. for resurfacers) in a 24 hour period.

CONCRETE Aggressively shot-blast or mechanically prepare the substrate to properly profile the substrate and remove hardeners, curing compounds, sealers, laitance and other contaminants. All edges and around columns or beams should be mechanically scarified. All termination points should not be feather edged, but should be saw cut with the termination ending at the sawcut.

FILLING & PATCHING Voids, cavities, nail and bug holes should be filled with a recommended epoxy filler. All large cracks should be V cut and filled with an appropriate semi-rigid epoxy crack filler.

JOINTS All expansion joints should be filled with an appropriate joint filler. When overlaying an expansion joint, a single saw cut through the epoxy overlay will prevent random fracturing.

APPLICATION

MIXING It is important that the liquids be mixed together first. Mix the liquids in an oversized container thoroughly and until streak free. After the liquids are thoroughly mixed, add in the aggregate. Mix in the aggregate with slow speed mixing equipment such as a jiffy mixer or rotating bucket/stationary mixing blade assembly. It is equally important that enough time is spent mixing in the aggregate to insure that the aggregate is thoroughly wetted out. No induction time is necessary. Improper mixing may result in product failure.

THICKNESS Apply the mixed material at 1/8 to 1/4 inch thickness. Apply the material with a hand trowel or other suitable application equipment. Do not over-trowel the material as this may cause isolated blisters to form. Direct air currents above or across the mortar during the curing process may cause isolated blisters to form. Maintain temperatures within the recommended ranges during the application and curing process.

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APPLICATION (CONTINUED)

RECOAT/TOPCOAT No recoating or topcoating is necessary. However, if you opt to topcoat the applied mortar, allow it to cure before topcoating. Many epoxies and urethanes can be used. Contact your sales representative for suitable topcoat selections.

CLEAN UP Uncured product can be cleaned up with soap & water, citrus based cleaners, alcohol or other solvents such as Xylene.

**Restrict the use of the floor to light traffic and non-harsh chemicals until the coating is fully cured (see technical data under full cure). It is best to let the floor remain dry for the full cure cycle.*

LIMITATIONS

FLOOR CLEANING Caution! Some cleaners may affect the color of the floor installed. Test each cleaner in a small area, utilizing your cleaning technique. If no ill effects are noted, you can continue to clean with the product and process tested.

- *Color stability may be affected by environmental conditions such as high humidity or chemical exposure.
- * Product is not UV color stable and may discolor if exposed to lighting such as sodium vapor lights.
- * Colors may vary from batch to batch due to variations in the silica filler.
- * Mortar colors are not from our standard color chart.
- * Substrate temperature must be 5 degrees F above dew point.
- * For chemical exposure areas, we recommend a suitable topcoat to reduce porosity and chemical migration.
- * Test data based on neat resin.

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