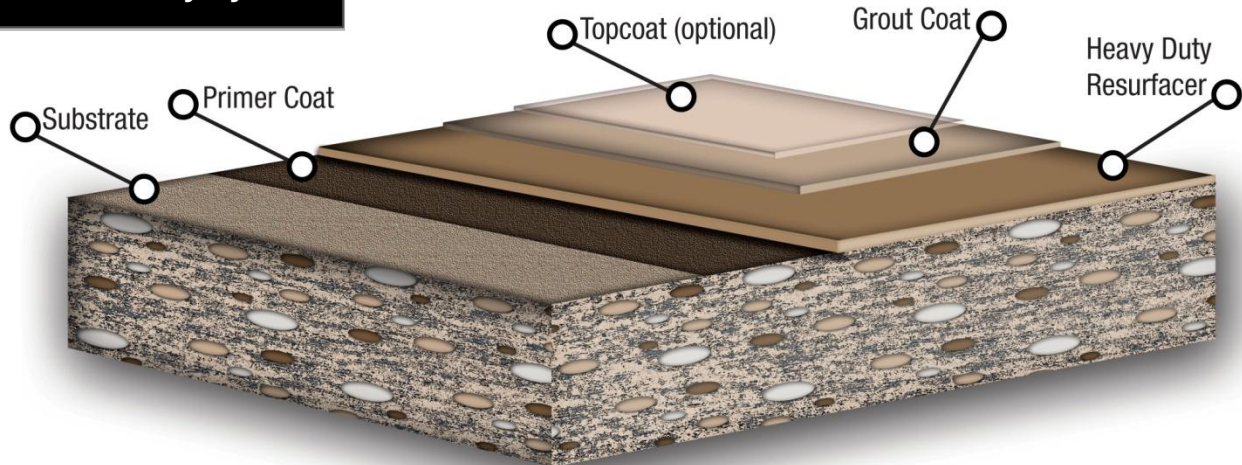


# RIGID-ROCK RS-31US – Urethane Cement Slurry Flooring System

## Urethane Slurry System



RS-31US is a Water-Based Cement Urethane Slurry Flooring System is a high heat resistant, high strength concrete resurfacing material. The versatility allows use in industries from food and beverage processing to chemical and water treatment facilities requiring a USDA compliant, thermal shock resistant grade floor or when a concrete floor has sustained damage requiring a 3/16” to 1/4” surface restoration.

The system described is APS’s standard system, APS has several other product options that also work for this system including, but not limited to low odor or low VOC products. Consult your sales representative for details.

### BENEFITS

- Withstands heavy and abusive service
- High impact resistance
- Thermal shock resistant and heat up to 300F
- Excellent wear characteristics
- Mortar binder is available in gray and red
- Aggregate is packaged in 42 lb. bags to provide accurate proportioning with mortar binder
- Typical application between 1/4” and 3/8” application

### RECOMMENDED FOR

- Food and Breweries/Bottling Plants
- Bakeries
- High Temperature Washdown/Sanitize areas
- Meat/Dairy/Fish Processing
- Slaughter Houses
- Commercial Kitchens
- Cook Areas
- Walk-In Coolers
- Wastewater Treatment

APS also has available several crack fillers, joint sealant and other support products. Please inquiry with your sales representative for more information on these products.

See individual component product data sheets for specific product properties. Refer to individual data sheets for preparation, mixing and application instructions and limitations, warranty and common chemical resistance information.

### SYSTEM COMPONENTS (approx 1/4” to 3/8”)

Coat	Product	Mix Rate	Coverage
Primer	None Required		
Mortar	RR 1592SL Urethane Cement Slurry	1:1 + 30 lb. aggregate	20 sf/gal
Wet Low Temps may cause bond issues – Coating Optional			
Grout	ST 4283 Low	2:1	125 sf @ 12 mils
Coat	Temp Coating		267 sf @ 6 mils
Wear	ST 3330	2:1	350 sf @ 5 mils
Coat	Aliphatic Urethane Coating		

Multiple Options Available

PHYSICAL PROPERTIES		
Property	Test Method	Result
Adhesion		350 psi concrete failure
**Flexural Strength	ASTM D790	3,500 psi
**Compressive Strength	ASTM D695	7,800 psi
**Tensile Strength	ASTM D638	1,100 psi
**Heat Resist		300F dry heat
Impact Resistance		Excellent
Abrasion Resistance	CS-17 1000/500	5 mg
Application Temperature		45° to 85° F

See individual component product data sheets for specific product properties (\*\*neat resin)

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**PRODUCT STORAGE:** Store product in an area so as to bring the material to normal room temperature before using. Continuous storage should be above 55°F to prevent product crystallization.

**SURFACE PREPARATION:** All dirt, oil, dust, foreign contaminants and laitance must be removed to assure a trouble free bond to the substrate. We recommend that an aggressive shot blast be performed prior to the application of this product. A less adequate method would be acid etching, but the etch should properly profile the substrate. 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 saw cut. All large cracks should be V cut and filled with an appropriate crack filler. 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. A test should be made to determine that the concrete is dry; this can be done by placing a 4'X4' 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. The plastic sheet testing is also a good method to determine if any hydrostatic pressure problems exist that may later cause disbonding.

**PRIMER MIXING:** Mix the liquids in an oversized container thoroughly and until streak free. No induction time is necessary. The mix ratio is two to one by volume. Improper mixing may result in product failure.

**PRIMER APPLICATION:** Apply the mixed material to the substrate with a brush or roller at the recommended thickness. While the primer is still wet, apply the epoxy overlay over the wet power trowel primer. Follow the procedures for placing the epoxy mortar overlay from the appropriate technical data sheet. Maintain temperatures within the recommended ranges during the application and curing process. If the epoxy primer tacks off before applying the epoxy mortar overlay, check for an epoxy blush and clean as necessary. Re-apply the power trowel primer over the previous primer and apply the epoxy mortar overlay before the primer tacks off. This product is only intended for use as a primer for epoxy mortar overlays.

**CLEANUP:** Use xylol

**MIXING:** This product is packaged with a gallon container of part A (8.3#) and a gallon container of part B (9.75#) with an aggregate component consisting of one bag (30#). Standard packages are in pre-measured kits and should be mixed as supplied in the kit. We highly recommend that the kits not be broken down. Add the part B component to an oversized mixing container first, followed by the part A component. After the two liquid parts are combined thoroughly and streak free, add in the provided aggregate and mix well with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and uniform in color. After mixing, transfer the mixed material to another pail (the transfer pail) and again remix. The material in the transfer pail is now ready to be applied on the prepared substrate. Remix occasionally to prevent settling of aggregate. Improper mixing may result in product failure.

**MORTAR APPLICATION:** Have the floor as dry as possible without any puddles of water present. If there is excess water on the sub-strate, take up excess with a suitable vacuum until a near dry condition exists. Then, after the material is thoroughly mixed, pour the material onto the substrate. Either use a trowel to push out and level the material evenly or spread with a gauge rake followed by an air release roller tool. Immediately after the product is applied, broadcast with aggregate to rejection on the wet surface. Remove excess aggregate after the material has cured. Surfaces not broadcasted could have an uneven texture, color streaks or color differences and an orange peel look. Maintain temperatures and relative humidity within the recommended ranges during the application and curing process. Do not apply to cracked or unsound concrete. Do not feather edge.

**CLEANUP:** Use xylol

**GROUT COAT MIXING:** This product has a mix ratio of 2 parts A (9.1#/gallon) to 1 part B (4.25#/gallon) by volume for standard colors, and 8.75# part A to 4.3# part B for the clear. Standard packages are in pre-measured kits and should be mixed as supplied in the kit. We recommend that the kits not be broken down unless suitable weighing equipment is available. However, a direct 2:1 mix proportioning by volume can be employed. After the two parts are combined, mix well with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and streak free.

Continue mixing for another couple of minutes to insure a homogeneous mixture. Make sure you scrape the bottom and sides of the pail while mixing. Improper mixing may result in product failure.

**GROUT COAT APPLICATION:** After the slurry mortar is applied and sufficiently cured (about 8 hours at 70-80°F), grind off all high spots and trowel marks before applying the grout coat. Make certain that the slurry mortar overlay where the product is to be applied, is clean, sound and free of all sanding and grinding dust and foreign contaminants. Apply the mixed grout by a flat flexible rubber squeegee so as to spread out the material in a uniform manner removing all excess material from the surface of the mortar; then backroll (removing all excess material) with a fine nap roller. Depending on the porosity of the mortar overlay and the color selected, it may be necessary to apply more than one coat of material to achieve uniform coverage. When applied properly, the texture of the mortar will still be visible. Maintain temperatures and relative humidity within the recommended ranges during the application and curing process.

**CLEANUP:** Use xylol

**OPTIONAL TOPCOAT (Wear Coat) PRODUCT MIXING:** This product has a two to one mix ratio by volume, mix two gallons of part A with 1 gallon part B. (volumes approximate) After the two parts are combined, mix well with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and streak free. Avoid whipping air into the coating. Improper mixing may result in product failure.

**TOPCOATING GROUT COAT:** After the grout coat has cured, Coat before 24 hours to achieve proper bonding.. If topcoating after 24 hours, it would be recommended that you degloss the grout coat before applying the optional topcoat. The mixed material can be applied by brush or roller. Maintain temperatures within the recommended ranges during the application and curing process. It is best to maintain a wet edge to avoid roller marks. Direct sunlight or high temperatures may cause visible roller marking during application. Exposure to certain types of lighting such as sodium vapor lights may cause the product to discolor.

**CLEANUP:** Use xylol.

**FLOOR CLEANING:** 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.

**RESTRICTIONS:** 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.

## NOTICE TO BUYER: DISCLAIMER OF WARRANTIES AND LIMITATIONS ON OUR LIABILITY

We warrant that our products are manufactured to strict quality assurance specifications and that the information supplied by us is accurate to the best of our knowledge. Such information supplied about our products is not a representation or a warranty. It is supplied on the condition that you shall make your own tests to determine the suitability of our product for your particular purpose. Listed physical properties are typical and should not be construed as specifications. **NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, REGARDING SUCH OTHER INFORMATION, THE DATA ON WHICH IT IS BASED, OR THE RESULTS YOU WILL OBTAIN FROM ITS USE. NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, THAT OUR PRODUCT SHALL BE MERCHANTABLE OR THAT OUR PRODUCT SHALL BE FIT FOR ANY PARTICULAR PURPOSE. NO WARRANTY IS MADE THAT THE USE OF SUCH INFORMATION OR OUR PRODUCT WILL NOT INFRINGE UPON ANY PATENT.** We shall have no liability for incidental or consequential damages, direct or indirect. Our liability is limited to the net selling price of our product or the replacement of our product, at our option. Acceptance of delivery of our product means that you have accepted the terms of this warranty whether or not purchase orders or other documents state terms that vary from this warranty. No representative is authorized to make any representation or warranty or assume any other liability on our behalf with any sale of our products. **Our products contain chemicals that may CAUSE SERIOUS PHYSICAL INJURY. BEFORE USING, READ THE MATERIAL SAFETY DATA SHEET AND FOLLOW ALL PRECAUTIONS TO PREVENT BODILY HARM.**