

### product data

#### SELECTION & SPECIFICATION DATA

<b>TYPE &amp; DESCRIPTION</b>	813 AR Coating is a 100% solids advanced ceramic composite, formulated to protect equipment from aggressive erosion, chemical attack and corrosion. Easily applied trowel, plastic tool or straight edge, 813 AR may be applied at a typical film thickness of 40-100 mils in one coat. The 813 AR is formulated for abrasive, erosive and corrosive environments where metal loss is often repaired by more conventional and costly weld overlay. It can be used either to rebuild eroded metal surfaces or to provide a wear resistant surface which frequently outperforms the original metal or weld overlay.
<b>ADVANTAGES</b>	Cures quickly to form an exceptionally tough, impact and abrasion resistant system, cured at temperatures as low as 50°F. Excellent adhesion to concrete, steel, and wood. Minimum down time. Sanitary, non-shrinking polymer. Easy to clean - USDA acceptable.
<b>USES</b>	813 AR may be used alone, or in conjunction with other Greenstone systems. This two-coat system provides extended wear and predictable preventative maintenance. The cured ceramic composite provides outstanding chemical and abrasion resistance with moderate gloss finish. <ul style="list-style-type: none"><li>• Condensers</li><li>• Screw Pumps</li><li>• Hoppers</li><li>• Wear Plates</li><li>• Pulp Dewatering Screws</li><li>• Impellers</li><li>• Slurry Pumps</li><li>• Heat Exchangers</li><li>• Volutes</li><li>• Waterboxes</li><li>• Cooling and Water Pumps</li><li>• Fans and Housings</li><li>• Hydro Pulpers</li><li>• Pipe Elbows</li><li>• Pump Castings</li><li>• Pitted Tanks and Pipes</li><li>• Valves</li><li>• Wet Scrubbers</li><li>• Tanks and Process Vessels</li><li>• Vacuum Pumps</li></ul>
<b>GOVERNMENT AGENCY</b>	Meets the requirements of the U.S. Department of Agriculture (USDA) for use as an incidental food contact flooring system.

**FOR INDUSTRIAL USE ONLY!**

<b>PHYSICAL DATA</b>	<b>Compressive Strength - 12,950 psi</b> <b>Tensile Strength - 3,150 psi</b> <b>Impact Strength - 100 in./lbs.</b> <b>Indentation - No indentation MIL-D-3134F</b> <b>Abrasion Resistance - 25 milligrams ASTM D-1044</b> <b>Maximum Temperatures - Wet Exposure 160°F, Dry Heat 250°F</b> <b>Shelf Life - 1 Year (warehouse conditions)</b> <b>Working Time - approximately 30 minutes at 75°F.</b> <b>Potlife - approximately 20 minutes at 75°F.</b> <b>Cure Time - hardens in 8-12 hours at 75°F. The warmer the temperature, the faster it cures. Allow a minimum cure of 24 hours for light traffic, and 96 hours for heavy traffic loads and chemical spillage.</b> <b>Solids - 100%</b> <b>Colors - Dark Gray.</b>
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<b>PACKAGING / COVERAGE</b>	<b>813 AR Coating -</b> <b>1 QUART KIT - covers approximately 6.8 square feet at 60 mils - containing the following -</b> <b>1 container - Part A (resin)</b> <b>1 container - Part B (hardener)</b> <b>1 container - Part C (Abrasion Resistant Aggregate)</b>
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## SURFACE PREPARATION AND SUBSTRATES

### SURFACE PREPARATION

**Metal Surfaces:** Degrease surface prior to sandblasting. Use organic solvents, alkaline solutions, steam, hot water with detergents, or other systems that will completely remove dirt, oil, grease, etc. Blast the surface to near white SSPC-SP 10-70, or NACE No. 2 using a Venturi blast nozzle with 100psi air. To produce the 4 mil minimum anchor pattern or tooth, the blasting media used shall be a properly graded, clean, sharp angular abrasive similar to Humble Abrasive Flint S7 (6-30 mesh), Steel Grit (HG25), or Black Beauty (BB1040).  
**New Concrete:** must have a minimum of 28 days cure, and no curing agents or sealers shall be used. Remove oil, grease or other loose or foreign materials and contaminants. A good bonding tooth, the texture of rough sandpaper, is required to maximize adhesion, with the removal of all glaze. Examples of mechanical surface prep including, but not limited to -

- A. Sandblast with steel shot, fine silica, or other similar material.
- B. Wheel Abrader
- C. Scarify

**Existing Concrete:** remove all loose, weak concrete, and any paint wax, oil, grease or other contaminants. Once the concrete has been cleaned and neutralized, mechanical surface preparation shall be used to provide a good bonding tooth, a texture of rough sandpaper, with the removal of all glaze. Examples of mechanical surface preparation including, but not limited to -

- A. Sandblast with steel shot, fine silica, or other similar material.
- B. Wheel Abrader
- B. Scarify

**Note:** Holes and depressions 1/4" or deeper should be prefilled with 350 grout, or a similar system, prior to application. All surfaces must be dry prior to application of polymer system.

## MIXING AND EQUIPMENT

### MIXING

Mix Part A and B thoroughly with a low rpm "jiffy" type mixer for 2 minutes, until completely homogeneous. Add the Part C and mix in well.

**Important!** - The working life of the mixed blend is approximately 30 minutes. Mixed materials remaining in a container will produce heat. Keep away from combustible materials. Do not reseal mixed containers!

## APPLICATION AND SAFETY

### APPLICATION

**Caution!** Application in direct sunlight, resulting in rising surface temperature, may cause blistering of the materials due to expansion of entrapped air or moisture in the concrete. Concrete surfaces that have been in direct sunlight must be shaded for 24 hours prior to application, and remain shaded until the initial set of the polymer. When the substrate temperature is rising, it is recommended to postpone application.

**Minimum application temperature:** Do not apply when substrate temperature is below 50°F.

For application, the 813 AR Coating resin & hardener should be stored at a minimum temperature of 70°F. Always apply the material as soon as blended. The pot life is approximately 20 minutes, and the working life is approximately 30 minutes.

**APPLICATION - Greenstone 813 AR can be applied at a minimum thickness of 40 mils. 813 AR Coating can be applied by brush, or roller. When used alone, two coats of 813 AR is recommended, at 40-100 mils per coat.**

**Trowel / Plastic Tool:** A stiff edge to match the contour of the expected finish.

**Brush:** Can be used to minimize & reduce trowel / tool marks.

**CURE TIME** - Will harden in approximately 8-12 hours at 75°F. The warmer the temperature, the faster the cure. For full cure at 75°F, allow 96 hours.

Minimum recoat times are as follows: 8-10 hours at 60°F, 4 hours at 75°F, 2 hours at 90°F

**CLEAN-UP - Cured or hardened 813 AR Coating is almost impossible to remove. Clean tools and equipment immediately with hot soapy water, or a mixture a acetone and ethanol.**

### SAFETY

Observe good personal hygiene. Certain personnel may be sensitive to various types of resins which may cause dermatitis. Avoid contact with skin and breathing of vapor. Read and follow all caution statements on product info bulletin, material safety data sheet and container labels for this product. This bulletin provides standard information for the system and application procedure. Since varying application conditions may not be covered, consult GREENSTONE Technical Service Department for further information.