



product data

SELECTION & SPECIFICATION DATA

TYPE & DESCRIPTION	818 AR 1/4" Wear Compound is a 100% solids advanced ceramic composite, formulated to protect equipment from aggressive erosion, chemical attack and corrosion. It is applied at a nominal film thickness of 1/4". Formulated for extremely abrasive and corrosive environments where metal loss is often repaired by more conventional weld overlay. It can be used either to rebuild eroded metal surfaces or to provide a wear resistant surface which typically outperforms the original metal, weld overlay or rubber liners.
ADVANTAGES	818 AR cures quickly at temperatures as low as 50°F to form an exceptionally tough, abrasion resistant polymer-aggregate matrix. Excellent wear characteristics extend equipment operating cycles. Tough resin structure resists thermal-mechanical shock. Outstanding adhesion results in reliable performance with no undercutting. Labor and downtime costs are reduced due to ease of application. Performs well under fluctuating chemical environments.
USES	818 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">• Chipper and Chip Bins• Hoppers / Chutes• Ni-hard Slurry Pumps• Pulp Dewatering Screws• Turbo Separators• Dust Collection System• Pulverizers• Pipe Elbows• Exhaust Fans• Screw Conveyors• Fly Ash Separators• Hydro Pulpers• Pneumatic Conveyors• Turbo Separators• Wood Chip Transport Fans• Cyclones• Wear Plates• Pulverized Fuel Lines• Tanks and Process Vessels• Scroll Castings.

FOR INDUSTRIAL USE ONLY!

PHYSICAL DATA	Compressive Strength - 8,600 psi Tensile Strength - 3,450 psi Impact Strength - 100 in./lbs. Indentation - No indentation MIL-D-3134F Maximum Temperatures - Wet Exposure 160°F, Dry Heat 250°F Shelf Life - 1 Year (warehouse conditions) Working Time - approximately 30 minutes at 75°F. Potlife - approximately 20 minutes at 75°F. Cure Time - hardens in 6-10 hours at 75°F. The warmer the temperature, the faster it cures. Allow a minimum cure of 24 hours for light traffic, and 48 hours at 75°F for heavy traffic loads and chemical spillage. Solids - 100% Colors - Dark Gray.
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PACKAGING / COVERAGE	818 AR Coating System - Supplied in multiple package sizes - 1 Quart Kit, 1 Gallon Kit and 3 Gallon Kit. Each kit contains premeasured containers (Part A and Part B), a set of application tools and instructions. <u>1 Gallon Kit - covers approximately 6.4 square feet at 1/4" - containing the following -</u> <i>1 container - Part A (resin)</i> <i>1 container - Part B (hardener)</i>
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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 3/16" or deeper should be prefilled 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.

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 818 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 818 AR is applied at a nominal film thickness of 1/4" (250 mils). Using a rounded plastic applicaton tool or trowel, press the material into the surface profile to completely wet out the surface for proper adhesion. Once the material is placed, it may be smoothed using a variety of methods. If required, the 818 AR can be ground using a fast wearing open type wheel. The 818 AR can not be machined. In certain aplications requiring additional support, expanded metal mesh may be welded to the metal substrate prior to applicaton of the 818 AR.

CURE TIME - Will harden in approximately 6-10 hours at 75°F. The warmer the temperature, the faster the cure. For full cure at 75°F, allow 48 hours. If the material is allowed to cure past a tack free state, roughed up the surface with 60 grid sandpaper prior to additional application.

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 818 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.