GREENSTONE Polymer Systems Inc.

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Greenstone 810 AR Coating

product data

SELECTION & SPECIFICATION DATA

TYPE & DESCRIPTION

810 AR Coating is a 100% solids advanced ceramic composite, formulated to protect equipment from aggressive erosion, chemical attack and corrosion. Easily applied by brush or roller, 810 AR may be applied at a minimum thickness of 12-16 mils per coat (2 coats recommended).

ADVANTAGES

Cures quickly at temperatures as low as 50°F to form an exceptionally tough, impact and abrasion resistant polymer matrix. Minimum down time. Sanitary, non-shrinking polymer. Gloss surface reduces drag, improving pump flow and efficiency. Tough resin structure resists thermal-mechanical shock Outstanding adhesion insures reliable performance with no undercutting. Labor and downtime costs are reduces due to ease of application. No heat curing is required. Performs well under fluctuating chemical environments.

USES

810 AR may be used alone, or in conjunction with other Greenstone systems. This two-coat system provides extended wear ad predictable preventative maintenance. The cured ceramic composite provides outstanding chemical and abrasion resistance with moderate gloss finish.

- Fans and Housings
- Hoppers
- Heat Exchangers
- Pump Casings
- Hydro Pulpers
- Structural Steel
- Sand Filter Vessels
- Tanks and Vessels
- Wet Scrubbers
- Volutes
- Valves
- Coal Hoppers and Feeders
- Cooling Water Pipes
- Waterboxes
- Coal Screens
- Wear Plates
- Condensers
- Impellers
- Vacuum Pumps
- Pulp Dewatering Screws
- Pitted Tanks and Pipes
- High Durability Deck Coatings

FOR INDUSTRIAL USE ONLY!

PHYSICAL DATA

Compressive Strength - 11,850 psi
Tensile Strength - 3,475 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 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.
Solids - 100%
Colors - Gray, Black.

PACKAGING / COVERAGE

810 AR Coating -

Supplied in multiple package sizes - 1 Pint Kit, 1 Quart Kit, 1 Gallon Kit, 5 Gallon Kit. Each kit contains premeasured containers (Part A and Part B).

1 QUART KIT - covers approximately 13.4 square feet at 30 mils (applied in two coats).

1 container - Part A (resin)
1 container - Part B (hardener)

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 1/16" or deeper should be prefilled with 860 AR Liner, 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.

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 810 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 810 AR can be applied at a minimum thickness of 10 mils. 810 AR Coating can be applied by brush, or roller. When used alone, two coats of 810 AR is recommended, at 16-20 mils per coat.

Brush: A high quality natural bristle brush should be used.

Roller: Use a 3/8" nap roller with phenolic core.

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 48 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 810 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.