GREENSTONE Polymer Systems Inc.

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Greenstone 230 Liner

product data

SELECTION & SPECIFICATION DATA

TYPE & DESCRIPTION

230 Liner is a 100% solids epoxy system, used to protect vertical surfaces subject to chemical attack. Applied at 60-80 mils nominal film thickness.

ADVANTAGES

The one coat system cures quickly to form an exceptionally tough, impact and abrasion resistant system. Excellent adhesion to concrete, steel, and wood. Minimum down time. Sanitary, non-shrinking polymer. Easy to clean - USDA acceptable.

CHEMICAL RESISTANCE

Not affected by water, oil, brine, most acids, and alkalines. For specific recommendations, please refer to Greenstone's Chemical Resistance Guide, or contact Technical Service.

USES

Formulated for optimum chemical resistance to the chemical exposures found in municipal wastewater treatment area, such as manholes, lift-stations, etc.

GOVERNMENT AGENCY

Meets the requirements of the U.S. Department of Agriculture (USDA) for use as an incidental food contact flooring system.

FOR INDUSTRIAL USE ONLY!

PHYSICAL DATA

Compressive Strength, ASTM D695 - 4385 psi
Tensile Strength, ASTM D638 - 1,529 psi
Flexural Strength, ASTM D790 - 1,200 psi
Thermal Coefficient of Linear Expansion, ASTM D696 - 3.78 X 10^{-5} in/in/°F.
Bond Strength, ASTM C-321 - Greater than 350 psi (100% substrate failure).
Impact Strength - 130 in/lbs.
Indentation - MIL-D-3134F - No Indentation
Water Absorption - ASTM C-413 - 0.047%
Shelf Life - Minimum 12 months when storage temperature is between 70°F and 85°F.
Working Time - approximately 40 minutes at 75°F.
Potlife - approximately 25 minutes at 75°F.
Cure Time - Greenstone 230 Liner will harden within a few hours at 75°F. The warmer the temperature, the faster it cures. Prior to water or chemical exposure, allow a minimum of 24 hours at 75°F. For temperatures between 50°F and 75°F, cure a minimum of 48 hours.
Flammability - Does not support combustion
Solids - 100%
Colors - Standard Gray

PACKAGING / COVERAGE

230 Liner -

230 Liner - 1 batch - covers approximately 40 square feet at 100 mils.
1 container - Part A (resin)
1 container - Part B (resin)
1 bags - Part C (chemically resistant aggregate)

SUPPLEMENTAL PRODUCTS

150 Topcoat

SURFACE PREPARATION AND SUBSTRATES

SURFACE PREPARATION

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 260 Liner, or a similar system, prior to application. All surfaces must be dry prior to application of polymer system.

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).

MIXING AND EQUIPMENT

MIXING

Mortar - Empty the contents of Part B into Part A and mix thoroughly. When completed, empty the container into a mechanical mixer, draining the container for approximately 30 seconds. Start the mixer, and slowly add the Part C, chemical resistant aggregate, and mix the three components for approximately 3 minutes - until completely homogeneous. Note - Person mixing should wear a dust mask or respirator.

Mixer: A mechanical mixer designed for quick, thorough mixing of aggregate epoxy systems similar to those manufactured by -

Kol Mixal
Div. of Man U Fab Inc.
7740 Main St. N.E.
Minneapolis, MN 55432

Quick Stir, INC.
P.O. Box 327
Port Clinton, Ohio 43452

Important! - The working life of the mixed blend is approximately 40 minutes. Always pour mixed batches as soon as possible. Mixed materials remaining in a container will produce heat. Keep away from combustible materials. Do not reseal mixed containers!

APPLICATION AND SAFETY

APPLICATION

LINER: Trowel or spray apply GREENSONE 230 LINER evenly over surface(building low spots to desired thickness). Apply at appproximately 40 square feet per unit, or 100 mils thick. After each unit has been applied, back roll with a short nap roller dampened with water (spin to remove any excess water from roller cover) to remove trowel marks and produce a smooth finish.

Cure Time - Greenstone 230 Liner will harden within a few hours at 75°F. The warmer the temperature, the faster it cures. Prior to water or chemical exposure, allow a minimum of 24 hours at 75°F. For temperatures between 50°F and 75°F, cure a minimum of 48 hours.

CLEAN-UP - Cured or hardened Greenstone 230 Liner 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.

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