

product data

SELECTION & SPECIFICATION DATA

TYPE & DESCRIPTION	661 Liner is a trowel applied monolithic Chloroendic Polyester Lining System, used to protect vertical surfaces subject to chemical attack. Applied at 1/8" nominal film thickness.
ADVANTAGES	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	Used as part of a polymer system for resurfacing food production plants, aisle ways, chemical spill containment area's, industrial production facilities, and pulp and paper mills.
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	<p>Compressive Strength, ASTM D695 - 16,610 psi (resin) Modulus of Elasticity, ASTM D695 - 1.062×10^6 Tensile Strength, ASTM D638 - 12,000 psi (resin) Flexural Strength, ASTM D790 - 3610 psi (resin) Thermal Coefficient of Linear Expansion, ASTM D696 - 1.2×10^{-5} in/in/°F. Bond Strength, ASTM C-321 - Greater than 350 psi (100% substrate failure). Impact Strength - 100 in/lbs. Indentation - MIL-D-3134F - No Indentation Water Absorption - ASTM C-413 - 0.029% Shelf Life - 90 days minimum when storage temperature is less than 70°F. Working Time - approximately 20 minutes at 75°F. Potlife - approximately 15 minutes at 75°F. Cure Time - Greenstone 661 Liner System will harden within a few 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. Flammability - Does not support combustion Solids - 98% by weight, 98% by volume. Colors - Charcoal</p>
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PACKAGING / COVERAGE	<p><i>661 Liner System - components sold separately -</i></p> <p><i>661 Primer - 1 pint - covers approximately 25 square feet at 8 mils -</i> <i>1 container - Part A (resin)</i> <i>1 container - Part B (hardener)</i></p> <p><i>661 Liner Mortar - 1 batch - covers approximately 13 square feet at 1/8"</i> <i>1 container - Part A (resin)</i> <i>1 container - Part B (resin)</i> <i>1 bags - Part C (chemically resistant aggregate)</i></p> <p><i>661 Topcoat - 1 pint - covers approximately 25 square feet at 8 mils -</i> <i>1 container - Part A (resin)</i> <i>1 container - Part B (hardener)</i></p>
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SUPPLEMENTAL PRODUCTS	610 Laminate Broadcast, 550 Grout, 657 Topcoat
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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 prior to application with the final coat of 661 Liner. 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

Primer - Mix Part A and B thoroughly and spread evenly at approximately 8 mils (200 square feet per gallon).

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.

Topcoat - Mix Part A and B thoroughly and spread evenly at approximately 8 mils (200 square feet per gallon).

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

Kol Mixal	Quick Stir, INC.
Div. of Man U Fab Inc.	P.O. Box 327
7740 Main St. N.E.	Port Clinton, Ohio 43452
Minneapolis, MN 55432	

Important! - The working life of the mixed blend is approximately 20 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

PRIMER: Apply approximately 8 mils of Primer by brush or roller. Spread the mortar immediately, before the Primer has hardened, which will occur in approximately 30 minutes at 75°F.

LINER: Place mortar on a mud board and then take a small amount on the center of a trowel. Spread mortar evenly over the surface firmly, and in long, even strokes, spread the material over the primed surface filling in low spots as you go. Remove any surface marks by quickly passing over the mortar surface with light pressure. A quality "swimming pool" finishing trowel, such as Goldblatt or Marshalltown, is recommended.

TOPCOAT: Apply approximately 8 mils of Topcoat by brush or roller.

CURE TIME - 661 Liner System will harden within a few hours at 75°F. The warmer the temperature, the faster the cure. Allow 24 hours, at 75°F, for light traffic, and 96 hours for full cure.

CLEAN-UP - Cured or hardened 661 Liner is almost impossible to remove. Clean tools and equipment immediately with hot soapy water, or a mixture of 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.

We guarantee our product to be free of defects in material and workmanship, and to be in accordance with our company quality control standards. All data, statements and recommendations made herein are based upon information we believe to be reliable, but are made without any representation or guarantee or warranty of accuracy and are made with reservation of all patent rights. Our products are sold on the condition that the user will evaluate them, as well as our recommendations, to determine their suitability for his own purpose before adoption. Also, statements regarding the use of our products or processes are not to be construed as recommendations for their use in violation of any patent rights or in violation of any applicable laws or regulations. Liability under any condition shall be limited to replacement of material only. No liability is assumed or implied, for injury to personnel, labor costs, product loss or any other expenses incidental to the structure or operation of the plant and equipment where the system is being applied.