



Sections

03 03 01 30
Joint & Crack Repair & Maintenance

POLY-STRONG™ PS-41

A LOW VISCOSITY SURFACE RESTORING POLYMER THAT FILLS-IN PINHOLES AND MICRO-DEFECTS TO INCREASE SURFACE DURABILITY AND ENHANCE REFLECTIVE GLOSS.

Description

This unique 95% solids, two-component, polyurethane/polyurea hybrid surface restoration grout was developed to resurface damaged concrete and floor imperfections such as air holes, sand aggregate pops, pitting, gouges and scratches. Hides imperfections and returns concrete floor surfaces to a “like-new” appearance. It’s a rigid structural polymer with a Shore D Hardness of 70-75 and is primarily used for fine grouting and repairing. Perfect for repairing defects smaller than 1/2” and perfecting the surface prior to polishing and sealing.

Solids

95%

Available Colors

Tough Gray
Neutral Gray
Warm Gray

Kit Includes

32oz Part A
32oz Part B
8oz Color

Coverage

225-450 sq. ft. / kit

Surfaces

Interior use only. Concrete, exposed concrete, warehouses, retail floors, industrial and commercial floors.

APPLIED



GROUND



POLISHED





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TECHNOLOGY // ADVANTAGES

- **Renews and Smooths Surfaces** - Rehabs old, pitted, gouged, worn, or damaged floors and transforms them into smooth, new, surfaces that can be easily polished and coated to look new.
- **Rapid-Set Formula** - For quick access to floor areas and grinding as early as 40 minutes after application.
- **Increases Density for a Higher Gloss** - Makes floors and surfaces less porous, eliminating imperfections, resulting in a more intense shine.
- **Add Sand to Repair Joints & Cracks** - Flexible application / field options can provide additional jobsite versatility.
- **LEED v4.1 Approval** - PS-41 contains low VOC's and is fully compliant with USGBC LEED v4.1 green building standards. Also complies with BD&C, ID&C, The WELL Building Standard, ANSI/GBI 01, Green Guide for Healthcare V2.2
- **Available in 3 Colors** - Choose the best color to camouflage floor surface pitting and imperfections
- **Low Viscosity** - Allows for deeper penetration into very small surface pits and imperfections, giving you better hiding and smoothing power.
- **Yields a Smoother Floor** - Reduces orange peel, texture, and dimples to achieve the highest gloss and DOI values.

TECHNICAL PROPERTIES

Viscosity Profile

Part A	199 cps
Part B	178 cps
Mixed	190 cps

Reaction Profile

Pot Life	5 min (100 grams, 74°F/23°C Sample)
Working Time (on floor)	5-8 min
Tack-Free	20-30 min
Grindable	40 min

Typical Physical Properties

Hardness	Shore D 70-75
Compressive Strength (ASTM D-638)	4767 psi
Tear Strength (ASTM D-624)	284 psi
Tensile Strength (ASTM D412)	4184 psi
Elongation (ASTM D412)	2.8 %
VOC Content	47 g/L
Mix Ratio by Volume	1:1
Odor	Minimal
Shrinkage	Negligible



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TESTING DATA

Meets the Following ASTM Test Methods:

ASTM D-638

Standard Test Method for Tensile Properties of Plastics

ASTM D-412

Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension

ASTM D-624

Standard Test Method for Measuring the Tear Strength of Thermoset Rubbers, Thermoplastic Elastomers, and Silicones

INFORMATION

Composition

Poly-Strong™ PS-41 is a two-component, 95% solids structural polyurethane/polyurea hybrid. When cured, Poly-Strong™ PS-41 is a rigid structural polymer with a Shore D Hardness of 70-75.

Basic Use

Poly-Strong™ PS-41 was developed to fill/repair micro-level concrete floor surface imperfections such as air holes, sand aggregate pops, surface pitting, scratches and gouges, etc. Poly-Strong™ PS-41 can also be mixed with sand aggregate to create a repair mortar suitable for joints, cracks, and larger surface defects. PS-41 is designed for use in commercial or retail polished concrete floors where final building temperatures are 32°F (0°C) to 120°F (49°C).

Related Products

Poly-Strong™ PS-41 is designed for use with a Color Pack.

Limitations

Poly-Strong™ PS-41 is designed primarily for fine grouting and not for use in repairing surface defects larger than 1/2" unless modified with sand aggregate. Depending upon surface conditions and/or environmental conditions, more than one coat of product may be required. Poly-Strong™ PS-41 may exhibit a slight color change or shifting if exposed to UV emitting lighting sources. PS-41 will exhibit a moisture reaction on damp or wet surfaces. Repair area should be dry.



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APPLICATION

Project Conditions

Poly-Strong™ PS-41 is designed for use on concrete floors at temperatures of 32°F (0°C) or higher; lower temperatures will extend initial cure time.

Poly-Strong™ PS-41 is moisture sensitive. Concrete should be clean and dry prior to installation of material. If moisture is present, material will exhibit bubbling/moisture reaction.

For best defect penetration, floor should be thoroughly cleaned using a scrubber with dry brushes and vacuumed completely.

Use with Concrete Grinding/Polishing Operations

When sequencing product installation as part of a concrete grinding/polishing process, install prior to your last metal or transitional tooling step. Use the least aggressive tooling which successfully removes the product and avoids opening more air holes/voids in the floor surface.

Defect Preparation and Repair

Remove all loose concrete chips, spalls, islands, etc. back to structurally sound concrete.

Repair area should be completely free of dust, debris, dirt, oils and moisture prior to application of material. For best defect penetration, floor should be thoroughly prepared mechanically with abrasive brushes and vacuumed clean.

Surface Defects/Spalls

For best results in achieving a flush repair surface profile, we recommend pre-filling defects larger than a 1/4" diameter flush or slightly high with either Poly-Strong™ PS-55 or add modification material to the Poly-Strong™ PS-41. Poly-Strong™ PS-41 can be modified with dried sand aggregate. If using a modified Poly-Strong™ PS-41, allow for adequate cure time prior to grinding/grouting (typically 2 hours).

Random Cracks

Cracks up to 1/8" (3 mm) in width should be cleaned using a Nyalox wheel, soft wire wheel or brush and vacuumed prior to filling. Fill/overfill crack with Poly-Strong™ PS-41 and allow material to cure slightly (approximately 15 minutes) prior to coating the entire floor area with Poly-Strong™ PS-41. For cracks wider than 1/8" (3 mm) or cracks where continual movement is suspected, an alternate recommended repair method is to rout out the crack using a diamond blade to a depth of 1/2" (12 mm) to 3/4" (18 mm) and filling the crack with a semi-rigid joint filler such as Poly-Strong™ PS-80 joint filler.

Coverage

Coverage will vary depending upon porosity of floor, profile after initial grinding, and number and severity of surface deficiencies. As a general guideline, expected coverage is 425 - 450 sq. ft. per 64 oz kit.



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INSTALLATION

Colors

The Poly-Strong™ PS-41 system is designed to be used only with the addition of one of the 3 available Color Packs. There is no Neutral or Clear/Natural color available. If the Poly-Strong™ PS-41 kit is mixed without a Color Pack, the cured material will have a milky white appearance. Color Packs must be thoroughly blended into Poly-Strong™ PS-41 Part A prior to mixing Part A with Part B at a 1:1 ratio. A Color Pack is included as part of the Poly-Strong™ PS-41 kit.

Available colors include: Tough Gray, Neutral Gray, and Warm Gray. Additional colors are available upon special request. Minimum quantities may apply.

Mixing

The Color Pack must be thoroughly blended into Part A prior to mixing Part A / Part B. Tear off the top of the Color Pack and empty 2 oz of colorant into 32 oz Poly-Strong™ PS-41 (Part A). A measuring device may be used to ensure correct amount of colorant is added (Color Packs contain roughly 8oz of total colorant). Once the correct amount of colorant is added to Part A, shake (or mix) using a mechanical mixer until color is thoroughly blended / consistent throughout. If no Color Pack is used, the product will not cure translucent, neutral or amber in color. It will dry milky white.

Material should be preconditioned to 65°-75°F for best results and designed work time. Poly-Strong™ PS-41 should be mixed at a 1A:1B ratio by volume. Upon combining Parts A & B, mixture should promptly be mechanically mixed with a helix paint mixer or similar for

45 seconds using a slow-speed drill until thoroughly blended prior to applying material to floor. If modifying Poly-Strong™ PS-41 for use in repairs with dried sand aggregate, thoroughly blend added material. The recommended ratio for sand modification is 2 to 2.5 parts added material to 1 Part Poly-Strong™ PS-41 (by volume), depending on desired mix and finished appearance.

Application Conditions

Surface must be thoroughly dry prior to application of Poly-Strong™ PS-41.

Application Timing *(Ground/Polished Concrete)*

Install Poly-Strong™ PS-41 prior to your last metal or transitional step. If initial cut is performed wet, the floor must be allowed to dry out adequately prior to placement of Poly-Strong™ PS-41.

Application

Apply material generously on the floor and work into the surface using a metal smoother, rigid-edged trowel or screeding device. Monitor surface for air holes resulting from entrapped air and re-apply as needed. In some cases, more than one coat will be required for best results. If two coats are desired, first coat should be ground off prior to installing a second coat. It is very important to monitor the viscosity and spreadability of the product during the application process. When product begins to thicken and application is more labored, it will not penetrate surface pores as effectively.

Note: Material and/or concrete surface temperature will affect working application time.



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INSTALLATION

Product Removal *(When Used as Grout)*

For best results in removing cured Poly-Strong™ PS-41 cap/film, use 80/120 metals or transitional diamonds. Use the least aggressive tooling possible to avoid exposing additional holes/imperfections. Removal of cured product should be performed as soon as cure allows. The earliest typical removal time is 40 minutes (20 minutes if using Accelerator Pack). Latest recommended removal time is 1-1/2 hours after placement. Longer delays will result in more difficulty in removing product and/or the potential need to use more aggressive tooling. These times may vary depending on temperature of product and concrete surface and type of equipment and tooling used.

Product Removal *(When Used as Repair Material)*

Poly-Strong™ PS-41, when used as a repair mortar, should be allowed to cure for 2 hours or more prior to removing overfill material. Overfill can be removed with a diamond cup wheel or similar. If pin holes are present at the surface, fine grouting with additional Poly-Strong™ PS-41 neat may be desired.

Warranty

KreteTek Industries Inc. warrants our products are manufactured to strict quality assurance specifications and that the information supplied by us is accurate to the best of our knowledge. Such information supplied about our products is not a representation or a warranty. It is supplied on the condition that you shall make your own tests to determine the suitability of our product for your particular purpose. Any use or application other than recommended herein is the sole responsibility of the user. Listed physical properties are typical and should not be construed as specifications. No warranty is made,

expressed or implied, regarding such other information, the data on which it is based or the results you will obtain from its use. We shall have no liability for incidental or consequential damages, direct or indirect. No representative is authorized to make any representation or warranty or assume any other liability on our behalf with any sale of our products.

Acceptance of delivery of our product means that you have accepted the terms of this warranty whether or not purchase orders or other documents state terms that vary from this warranty. No representative is authorized to make any representation or warranty or assume any other liability on our behalf with any sales of our products. Our products contain chemicals that may cause serious physical injury. Before using, read the Safety Data Sheet and follow the precautions to prevent bodily harm.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on KreteTek Industries Inc. present knowledge and experience. However, KreteTek Industries Inc. assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. KreteTek Industries Inc. reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the



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product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

For professional use only.

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KreteTek Industries Inc.
66 River Road
Hudson, NH 03051

www.Ghostshield.com

Customer Service and Technical Support

1-855-KreteTek (1-855-573-8383)