



SPARTA-STAIN™

Semi-Transparent Stain & Sealer/Finish Coat Polyaspartic Aliphatic Polyurea

Technical Product Bulletin

Product Description

Sparta-Stain™ polyaspartic polyurea semi-transparent stain and sealer is a combination primer and sealer finish containing dyes and pigments that gives the effect of varied or altered colors simulating acid, dye, or acrylic staining, or other methods. It can be applied to properly prepared concrete, overlays, wood decks, or deck-like substrates.

Sarta-Stain™ polyaspartic polyurea semi-transparent stain and sealer has excellent wetting and penetration into the pores of these substrates and provides excellent bond strength. This combination primer and sealer-finish containing dyes and pigments saves time and labor steps, allowing decorative concrete or wood staining projects to be completed in hours within a given day and same-day walk-on within 3 hours of the application. It is excellent for all-seasons application and will harden at temperatures below freezing.

Sparta-Stain™ has excellent outdoor properties and is highly resistant to UV rays, color change, loss of gloss, abrasion and wear, mechanical impact, staining, commercial and household cleaners, pool water treatment products, and hot tire pick-up.

Product Features and Benefits

- Combination self-priming and color stain sealer-finish coat.
- Highly resistant to UV rays, color change, and fading and loss of gloss.
- Excellent resistance to abrasion, impact, wear, staining, hot tire pickup, commercial and household cleaners, and splash and spill chemical exposure.
- Low-temperature cure (-30°F/-34°C); longer cure time needed in low temperatures. (Note: Reference is related to surface temperature, not ambient temperature.)
- Recoat time, 1 hour; walk-on time, 1 to 3 hours.
- Can add micro media agents to improve slip reduction.
- VOC compliant.
- Low solvent odor.

Product Uses

- **Stain Colors Over Concrete:** Single- or multiple-coat system that achieves the desired variegation effect of simulated acid, dye, or acrylic staining or other methods used in decorative concrete. As a stand-alone system, it achieves a high level of abrasion, impact, staining, hot tire pick-up, chemical, and UV resistance properties without the need for an additional enhancing sealer.
- **Stain Colors Over Wood or Wood-Like Decking:** Single or multiple coats to achieve penetration into the pores and provide a high degree of adhesion and resistance to staining and moisture penetration. As a stand-alone system it achieves a high level of resistance to abrasion, impact, staining, chemical, and UV attack without the need for an additional enhancing sealer.
- A final clear finish coat is optional. But if desired or required, Sparta-Stain™ polyaspartic aliphatic polyurea standard clear sealer-finish can provide:
 - ✓ Additional resistance to abrasion, wear, UV attack, color change, loss of gloss, dirt or hot tire pick-up, staining, household or commercial chemical cleaners, or pool treatment chemicals.
 - ✓ Optical clarity and help in “popping” the colors of underlying surfaces and their colors, making them more vivid and pronounced.
 - ✓ Great reduction of the graying effects of wood decking exposed to direct UV ray attack.

Product Data

Type of Material: Polyaspartic Aliphatic Polyurea

VOC Content: 2.8 lb/gal (340 g/L) to 0 (zero) VOC content

Recommended Dry Film Thickness: 1 to 6 mils per coat

Colors: Refer to Sparta-Stain™ color chart

Gloss: High

Shelf Life: 12 months unopened. Store at 40°F to 100°F (4°C to 38°C) in a covered area (out of direct sun)

Pot Life:* 25 to 30 minutes

Minimum Recoat:* 1 hour, minimum

Light Foot Traffic:* 1 to 3 hours minimum

*@ 70°F (20°C) and 50% Relative Humidity

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Product Data, cont'd.

Maximum Recoat:* 48 hours (contact manufacturer if longer)

Mixing Ratio:* 1.0 part A; 1.0 part B

Property Profile:

Tensile Strength, ASTM D 638: 4,500 to 5,000 psi
Falling Sand Abrasion Resistance, ASTM D 968:
Colors 38 liters sand/1 dry mil
Mandrel Bend, ASTM D 522: Passes, no cracking, ? -in. mandrel bend

Theoretical Coverage @ 72% Volume Solids:

1 mil DFT	1,155 ft ²
2 mils DFT	577 ft ²
3 mils DFT	385 ft ²
4 mils DFT	289 ft ²
5 mils DFT	231 ft ²
6 mils DFT	193 ft ²

Surface Preparation for Concrete

Before application the receiving surface must be deemed structurally and mechanically sound, clean, and dry. Proper surface preparation is required for decorative-concrete, thin-film "Class-A-type" flooring systems or sealer-finish coatings. This is best achieved with mechanical grinding machines using diamond heads, achieving a final 50- to 120-grit profile. Recommended surface profile is SP-2, Reference ICRI Technical Guideline No. 03732.

All receiving surfaces must be free of previous coatings, sealers, curing compounds, water repellents, laitance, efflorescence, oils, fats, grease, waxes, residues from cleaning compounds, non-visible soluble salts, and any other impediments to adhesion. The resulting surface must be a neutral pH 7.

Always check for potential bond breakers. One method is simply wiping the surface of the prepared concrete with a dark cloth. If white powder is present it should be removed. Another method entails pouring a slight amount of water on the concrete in random areas. If the water is absorbed into the concrete and leaves it wet, the substrate is porous and thus acceptable. If water beads up, this indicates that a bond breaker is still present and further surface preparation steps are necessary, such as additional mechanical grinding.

The rising moisture vapor emission rate must not exceed 3 pounds per 1,000 square feet (3 lb/1,000 ft²) over a 24-hour period as measured by the calcium chloride test method, ASTM F-1869. The relative humidity in the slab must not exceed 80 percent.

Any repairs that are not associated with normal cleaning and surface preparation work (i.e., cracks, chips, pitted/severe spalls deemed non-structurally sound or have levelness issues) must be properly addressed and remedied prior to application of the coating due to the fact that coatings follow the contours of the existing substrate. All spalls and cracks should be repaired in accordance with ICRI standards.

Surface Preparation for Wood or Wood-Like Decking

For existing decks having previously been stained or untreated, it is necessary to mechanically prepare the surface by use of a random orbital sander beginning with 80 grit sandpaper and ending with 120 grit sandpaper. Follow this with complete solvent wiping using clean cloths and xylene to remove moisture in the substrate pores. Allow 45 to 60 minutes to dry before applying the semi-transparent colored stain or natural-look Sparta-Stain™ standard clear polyaspartic aliphatic polyurea sealer-finish coat. Do not power wash as this adds moisture to the substrate pores that can cause problems associated with moisture entrapment.

Mixing

Mix "Part A" and "Part B" in equal parts (1:1) using a clean, dry, working pot. Stir gently, avoiding overmixing or creating a vortex that would introduce moisture. Do not mix at or below the dew point, which will shorten the pot life. No induction time is required prior to use.

If micro-media agents are to be incorporated, add them after thoroughly mixing "A" and "B."

Potlife

An approximate 25 to 30 minutes workable potlife exists at a temperature range of 70°F to 80°F (and 50% relative humidity). At higher temperatures and humidity the pot-life can be shorter.

*@ 70°F (20°C) and 50% Relative Humidity



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Application Instructions for Concrete or Overlayments

Sparta-Stain™ semi-transparent stain sealer achieves its simulated acid stain look on concrete or overlayments by application methods, techniques, and surface porosities resulting from recommended surface preparation methods. Recommended application methods include paint roller (conventional or modified), brush, mop, broom, squeegee, hand trowels, putty knives, and/or hand gloves with cloths or rags. Other application methods include HVLP spray, air brush, syringe, and hand-bottle sprayer.* One or more coats of the Sparta-Stain™ stain sealer can be applied following the recoat instructions. A final coat of Sparta-Stain™ polyaspartic aliphatic polyurea clear sealer-finish can be applied for additional performance properties.

Application Instructions for Wood or Wood-Like Decking

Sparta-Stain™ semi-transparent stain sealer can best be applied to flat or vertical surfaces using a brush or industrial-grade roller with a phenolic-resin core and a synthetic nap or lambs wool cover, 1/2 - to 1 - inch nap. It is best to use a back-and-forth motion running with the grain of the wood. One or more coats of Sparta-Stain™ stain sealer can be applied following the recoat instructions, or for a natural look of the wood apply Sparta-Stain™ clear polyaspartic aliphatic polyurea sealer-finish.

Cleanup

Use Xylol or MEK. DO NOT USE ALCOHOLS.

Storage and Shelf Life

The product must be stored in tightly sealed containers in a climate-controlled, dry location at normal room temperature. Containers which have been opened for use must be re-sealed immediately in a new container, preferably filled to the top (the more airspace in the container the greater the potential for reaction with moist air, decreasing the shelf life of the product).

Safety Precautions

Polyaspartic aliphatic polyurea products contain chemical ingredients that are considered hazardous. Read the container label warning and Material Safety Data Sheet for important health and safety information prior to use for details on the safe handling and use of these products. This is especially important when spraying.

*Consult HP Spartacote™ Coatings regarding non-hand application methods.

NON-Warranty: The information herein is based upon the best information available at the time of printing. Data provided is intended for those having skill and ability to use products recommended in a safe and responsible manner. LIABILITY is limited to the cost of material proven to be defective. There is no warranty expressed or implied as related to any issue which is deemed to be a direct result of improper surface preparation or cleaning, application over concrete or cementitious surfaces which have not reached full cure out, those having excessive rising moisture/vapor or hydrostatic pressure, application over surfaces which have previously been sealed without first testing for compatibility/adhesion, adverse water conditions, acts of God or acts of others, constant submersion in harsh environments, workmanship or applicator, or any other cause and effect which is not related to defective material.

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