



VOC-Free Polyaspartic Aliphatic Polyurea Technical Product Bulletin

Product Description

HP Spartacote primer-sealer/finish coatings, pigmented or clear, being self-priming, both decorative and protective, are a new generation of fast-curing, two-component, polyaspartic aliphatic polyurea products for interior or exterior use over properly prepared concrete, metal, wood, mineral substrates, and certain plastics.

They have excellent penetration and bond strength to properly prepared surfaces and are UV resistant, light stable, and abrasion, impact, and wear resistant with flexible properties. They have good splash and chemical-spill-resistant properties involving commercial and household cleaners, pool water treatment products, and hot tires.

HP Spartacote coatings are ideal for garage floors, patios, walkways, driveways, pool decks, concrete countertops, automotive sales and service areas, restaurant kitchen and dining areas, courtyards, atriums, malls, retail stores, rest rooms, warehousing, animal housing facilities, etc.

Product Features and Benefits

- Self-priming, excellent penetrating and bond strength.
- Excellent abrasion, impact, and wear resistance.
- Excellent hot tire pickup resistance.
- UV-resistant; optical clarity of clear sealer/finish.
- 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 2 hours.
- Can add micro media agents to improve slip reduction.
- VOC compliant.
- Meets FDA/CFSAN, U.S. Food Code, Physical Facilities criteria as outlined in 6.101.11 Surface Characteristics USDA acceptable. Not tested for 21 CFR food contact.
- Excellent stain resistance.
- Skydrol resistance.
- Random/incidental heat contact: tolerant to 300°F.
- Low solvent odor.

Product Uses

- Three-coat garage floor system consisting of self-priming color primer/sealer followed by clear “bed” coat for accepting and wetting decorative flake chips (or other decorative media), followed by clear sealer/finish coat.
- Final clear sealer/finish over decorative concrete surfaces such as acid, color- or dye-stained, semi-polished concrete, polymer-modified cementitious overlays, or seamless multi-build epoxy/color quartz flooring.
- High foot traffic, along with certain types of vehicle and material-handling equipment.
- UV-resistant sealer/finish coat over safety surfacing systems or outdoor running tracks.

Product Data

Type of Material: Polyaspartic Aliphatic Polyurea

VOC Content: VOC-free

Recommended Dry Film Thickness: 2 to 6 mils per coat

Colors:

Clear: High or medium gloss

Pigmented: Standard factory or custom colors

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

Pot Life:* 25 to 30 minutes

Minimum Recoat:* 1 hour, minimum

Light Foot Traffic:* 1 to 3 hours minimum

Maximum Recoat:* 48 hours (contact manufacturer)

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:

Clear 30 liters sand/1 dry mil

Pigmented 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 ft²

2 mils DFT 577 ft²

3 mils DFT 385 ft²

4 mils DFT 289 ft²

5 mils DFT 231 ft²

6 mils DFT 193 ft²

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

HP Spartacote, LLC

1550 Larimer Street
Denver, CO 80202

Office: 866-966-1DAY (1329)
Emergency: 1-800-400-2361

www.hpspartacote.com



Surface Preparation

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 repellants, 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 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.

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, they are to be added after thorough mixing of "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 potlife can be shorter.

Application Instructions

Roller application is recommended. The roller must have an industrial-grade, phenolic-resin core with a synthetic-nap or lambs-wool cover, 1/8- to 3/8-inch nap, 18-inch width.

If airless spray application is considered, consult the manufacturer. Note: Never use a pump-up sprayer, spray bottle, or conventional air atomizing methods as this will introduce air and moisture to the coating, resulting in bubbles, blisters, or pinholes.

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 resealed 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.



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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.