

PP-S85 : HYBRID HI-PERFORMANCE POLYASPARTIC (SLOW-LOW ODOR)

TECHNICAL DATA SHEET

DESCRIPTION

PP-S85 is a two-component, **slow-curing, low-odor**, hybrid polyaspartic coating system designed as a decorative yet durable coating for commercial and industrial flooring. Formulated with aliphatic chemistry, PP-S85 is color stable, allowing it to resist UV exposure without the color shifting seen with other coating systems such as epoxies. PP-S85 is a simple 1:1 mix ratio system with pot life formulated for rolling, brushing, or spray application. It has a generous application window for easy application at low temperatures and high humidity.

PRIMARY APPLICATIONS

- UV-stable top coat for concrete floor coatings
- Marine protection for fiberglass, steel, concrete or wood
- Aircraft hangar floors
- Low temperature equipment
- Maintenance facilities
- Offshore platforms
- Industrial shop floors
- Car washes or wash bays
- Secondary Containment
- Cooling towers
- Bridges
- Wastewater treatment applications

ADVANTAGES

- Lower odor than most polyaspartic products
- Cures at temperatures just above freezing
- Can be applied below -20°F (-28.9°C) with special handling
- Excellent UV resistance, non-yellowing, and high-gloss characteristics
- Excellent color stability
- Achieve a variety of colors, patterns, and logos, using decorative flakes, particles, or overlays
- Excellent abrasion and impact resistance
- Micro-media traction agents can be introduced into the liquid system or dispersed into the top coat
- Excellent chemical resistance, resistant to Skydrol
- Resistant to hot tire transfer
- High-build capability in lifts of 10 – 12 mils maximum
- May be matted with a matting agent
- Bonds to many properly prepared substrates, including metals, concrete, and fiberglass

TECHNICAL DATA

| | | |
|------------------------------------|--|---|
| PACKAGING | 2 US gal (2 x 1) (7.57 L) or 10 US gal (2 x 5) (37.8 L) | |
| COLOR | Clear or Available Pigmented | |
| RECOMMENDED THICKNESS ¹ | PRIMER | FINISH COAT |
| SOLID COLOR | 8 mils (200 ft ² /gal) | - Over solid color : 6 mils (266 ft ² /gal) - Over vinyl chips : 12 mils (140 ft ² /gal) |
| SHELF LIFE | 12 months in original unopened factory sealed container. Keep away from extreme cold, heat, or moisture. Keep out of direct sunlight and away from fire hazards. | |
| MIX RATIO, BY VOLUME | A:B = 1A : 1B | |
| POT LIFE, 16 oz (500g) MASS | 20 minutes @ 77°F (25°C) | |
| WORKING TIME ² | 45 - 60 minutes @ 75°F (25° C) ² | |
| VOC | 121.8 g/l | |

PROPERTIES

@ 73°F (23°C) AND 50% RH.

| | PART A | PART B | MIXED |
|--|--|---------------------------|--------------|
| SOLIDS CONTENT, BY VOLUME CLEAR | 93% | 78% | 85% |
| SOLIDS CONTENT, BY WEIGHT CLEAR | 92% | 75% | 83% |
| DENSITY Kg/L | 1.06 | 1.15 | 1.11 |
| THINNER | Xylene recommended, not to exceed 5% x Vol | | |
| DRYING TIMES @ 72°F (22°C) ² | | | |
| TACK-FREE | | 1 - 2 hours | |
| RECOAT TIME | | 2 hours | |
| FOOT TRAFFIC | | 2 - 4 hours | |
| HEAVY WHEELED TRAFFIC | | 24 hours | |
| FULL CURE | | 4 - 7 days | |
| ABRASION RESISTANCE ASTM D4060 CS17 Wheel/1,000 g/1000 cycles | | 9 mg loss | |
| ADHESION, ASTM D4541 | | >350 psi (Concrete fails) | |
| WATER VAPOR ABSORPTION, ASTM D570 | | 0.2% | |
| HARDNESS, ASTM 2240 (SHORE D) | | 57 - 60 | |
| FLEXIBILITY, 1/8-in MANDREL, ASTM D1737 | | Pass | |
| FALLING SAND ABRASION RESISTANCE (L SAND/1 DRY MIL) ASTM D968 | | 45 | |
| | PART A | PART B | MIXED |
| VISCOSITY | 350 - 450 cP | 75 - 100 cP | 125 - 225 cP |
| GLOSS, ASTM D523 | | 95+ GU | |

¹ Recommended application thicknesses are stated for smooth surfaces. Rough surfaces may require more material or multiple coats. Maximum single application thickness, 12 mils.

² Drying and cure times will be affected by changing ambient conditions, rising or falling temperatures, changes in humidity, and air movement.

PROPERTIES (cont.)

@ 73°F (23°C) AND 50% RH.

| | | |
|--------------------------------|---------------------------------|------------------------|
| TENSILE STRENGTH, ASTM D638 | 6,500 - 7,500 (44.8 - 51.7 MPa) | |
| ELONGATION AT BREAK, ASTM D638 | 100% | |
| COMPRESSIVE STRENGTH, ASTM 695 | NEAT | 9,500 psi (65.50 MPa) |
| | QUARTZ FILLED | 13,700 psi (89.63 MPa) |
| | VINYL MOSAIC FLAKE FILLED | 12,200 psi (82.73 MPa) |
| VOC | | 121.8 g/l |

SURFACE PREPARATION

Concrete substrates should be cured for a minimum of 30 days and have a minimum compressive strength of 3,000 psi. Surfaces must be clean, sound and properly prepared. Suitable preparation methods are recirculating abrasive shot-blasting, and/or diamond abrasive grinding. Remove all surface contamination before preparation. All soil, grease, oil or wax, or curing-agents must be removed.

Any preparation method should produce a uniform surface profile of CSP-3 (ICRI Guide 03732,) or greater. Acid etching of concrete is unacceptable and will void Manufacturer's warranty.

Existing, well-adhered compatible coatings may be prepared by sanding or grinding to produce a uniformly open, gloss-free surface.

Do not apply to wet substrates. Test for concrete moisture before application (see Concrete Moisture.)

Thoroughly vacuum prepared surface to remove all dust just prior to application. Protect prepared surface against contamination prior to application of product.

CONCRETE MOISTURE

Test for concrete moisture in accordance with ASTM F2170-19 (Wagner® RapidRH™ or similar.) If moisture is indicated to be in excess of 85%, apply PurEpoxy PE-VRM system in accordance with the published technical data sheet.

Alternately, test for excessive concrete moisture in accordance with ASTM F2659. Moisture content of concrete substrate must be ≤ 4 % by mass as measured with an impedance type (Tramex® CME/CMExpert) concrete moisture meter on prepared surface. Do not apply to concrete substrate with moisture levels > 4 %. If moisture content of concrete substrate is > 4 %, use PurEpoxy PE-VRM system in accordance with the published technical data sheet. Do not utilize resistance type moisture meters (Delmorst & similar).

MIXING

Precondition all components for 24 hours to ambient temperatures. In clean mixing pail, mix measured parts (1A : 1B) resin & hardener. Do not mix more material than can be distributed and applied in the working time window. Mechanically mix only, do not mix by hand. Using a Jiffy/Jiffler, or similar type mixing attachment and slow-speed drill, slowly mix the components being careful not to introduce excessive air.

Mix for 3 minutes. Ensure all material is scraped by side wall and bottom of mixing container. Apply material to floor immediately after mixing. Delay in distributing product will result in exothermic heat buildup in container.

APPLICATION

The recommended application method is the use of non-marking rubber squeegee and roller application. Notched squeegees of the appropriate notch depth may be used for thicker applications.

18-inch rollers are recommended on larger area floors to reduce lap marks. Roller should have solvent-resistant phenolic core, with high quality non-shedding fiber covers. Use 1/4-inch to 3/8-inch nap, depending on final finish and thickness desired. Quality brushes or wall-edgers may be used for cutting in margins.

Distribute material evenly with non-marking (gray EPDM type, or similar) rubber flat squeegee. Apply even film at desired thickness. Roll material in two directions to achieve uniform film. Finish roll in one direction, typically at right angles to primary sight-line when entering room.

LIMITATIONS

- Prior to application, measure and confirm the ambient temperature and humidity conditions of air and substrate
- Measure and confirm temperature of material. Precondition material for 24 hours prior to mixing
- Minimum/Maximum substrate temperature at application: 35° F (1.6°C) / 85°F (30°C)
- Maximum relative humidity during application and curing : 80%
- Substrate must be 5°F (3°C) above dew point. Ensure conditions will not change during application and curing
- Observe concrete moisture limitations stated in Concrete Moisture section
- On porous, non-concrete substrates, ensure that there will be no moisture penetration on positive side
- Protect from moisture and condensation for 24 hours after application
- Do not apply to substrates exhibiting or tested positive for alkali silica reaction (ASR)
- Do not use propane or kerosene fueled heaters. Permanent discoloration of coating may occur
- For professional use only by experienced personnel

CHEMICAL RESISTANCE

| CHEMICAL | RESULTS 77°F (25°C) |
|------------------------------|---------------------|
| ACETIC ACID 100% | C |
| ACETONE | C |
| AMMONIUM HYDROXIDE 50% | RC |
| BENZENE | C |
| SATURATED BRINE | R |
| H ₂ O CHLORINATED | R |
| HOUSEHOLD BLEACH 10% | R |
| DIESEL FUEL | RC |
| GASOLINE | RC |
| GASOLINE 5% MTBE | RC |
| GASOLINE 5% ETHANOL | RC |
| HYDROCHLORIC ACID 20% | R |
| HYDROCHLORIC ACID 10% | NR |
| HYDRAULIC FLUID | RC |
| ISOPROPYL ALCOHOL | R |
| LACTIC ACID | RC |
| MEK | RC |
| METHANOL | R |
| METHYLENE CHLORIDE | C |
| MINERAL SPIRITS | RC |
| MOTOR OIL | R |
| MTBE | C |
| MURIATIC ACID 10% | R |

| CHEMICAL | RESULTS 77°F (25°C) |
|-------------------------------|---------------------|
| SALT SOLUTION 10% | R |
| NITRIC ACID 20% | NR |
| PHOSPHORIC ACID 10% | R |
| PHOSPHORIC ACID 50% | NR |
| POTASSIUM HYDROXIDE 10% | R |
| POTASSIUM HYDROXIDE 20% | R, DIS |
| PROPYLENE CARBONATE | RC |
| SKYDROL | C |
| SODIUM HYDROXIDE 25% | R |
| SODIUM HYDROXIDE 50% | R, DIS |
| SODIUM HYPOCHLORITE 10% | R |
| SODIUM BICARBONATE | R |
| STEARIC ACID | R |
| SUGAR SOLUTION | R |
| SULFURIC ACID 10% | R |
| SULFURIC ACID >50% | RC |
| TOLUENE | R |
| 1,1,1, TRICHLORETHANE | C |
| TRISODIUM PHOSPHATE | R |
| VINEGAR, 5% | R |
| WATER | R |
| WATER, 14 DAYS @ 180°F (82°C) | R |
| XYLENE | RC |

R = Recommended/little or no visible damage

RC = Recommended conditional/some effect, swelling, or discoloration

C = Conditional, splash & occasional spill. Cracking, crazing may occur if not cleaned immediately.

NR = Not recommended for any exposure

DIS = Discoloration with any exposure

CLEAN UP

Clean tools with appropriate solvent before curing. Cured material is very difficult to remove. Clean any spills and splashes before curing.

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION

Prior to each use of any product manufactured by A.P Nonweiler/PurEpoxy, its subsidiaries or affiliates, the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at <https://purepoxy.com/documentations/> or by calling A.P Nonweiler. Nothing contained in any A.P Nonweiler/PureEpoxy literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the A.P. Nonweiler/PurEpoxy product.

WARRANTY STATEMENT

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