



Product Data Sheet

PA3000-PDS-030520



Solvent-based, Fast Cure, Spray Grade, Low VOC, 2-Component Aliphatic Polyaspartic

DESCRIPTION: Smith's Polyaspartic 3000 series products are Spray Grade, 2-Component, Fast-Cure, High-Performance, Aliphatic Polyaspartic coatings. Smith's Polyaspartic 3000 yields a gloss finish while Smith's Polyaspartic 3550 yields a Low Sheen Finish. Both products are High Performance, Resilient, U.V. Stable and Abrasion Resistant film with exceptional splash and chemical spill properties for application to a variety of substrates including, but not limited to concrete, wood, fiberglass, metal and more.

Smith's Polyaspartic 3000 series products were specifically developed for use with production paint spray equipment and HVLP sprayers as well as ease of use with a convenient equal volume mix ratio and thin consistency plus a good pot life. Smith's Polyaspartic 3000 series products are an excellent coating system for use in Theme Parks, Retail, Commercial or Industrial environments which require color stability, faster return-to-service and durability.

RECOMMENDED USE OVER:

- Over properly prepared, etched and treated metal
 - *Steel
 - *Aluminum
 - Bronze
 - *Stainless Steel
 - Aluminum Alloys
 - *Magnesium
 - *Brass
 - *Copper
 - Zinc
- Well bonded existing industrial coatings & automotive paints
- Fiberglass
- Wood

**Ensure corrosion has been removed & treated prior to coating*

HIGHLIGHTS:

- Heavy Duty
 - Flexible
 - Tenacious Bond*
 - Chemical, Impact, Scratch & "Pick" Resistant
- For Interior & Exterior Use
- Low VOC's - Less than 2 g/L
 - Meets Source Specific Standards Rule 1113 established by AQMD in California
- Easy to Clean
- Fast Curing - Overnight Return to Service
- Meets FDA Food Code
 - Physical Facilities 6-101.11 Surface Characteristics. Not tested for CFR 21 Direct food contact

**select surfaces require a separate primer*

STORAGE:

Indoors between 40°F (4.4°C) to 90°F (32.2°C)

INSTALLATION TEMPERATURE RANGE:

40°F (4.4°C) to 85°F (29.4°C) with less than 80% Ambient Humidity

SHELF LIFE:

12 Months in original, unopened containers
30 days once opened

PART NUMBER & PACKAGING:

Polyaspartic 3000 Part #		Polyaspartic 3550 Part #	
Gloss		Low Sheen	
2 Gallon Kit	SCS-ASP3000-256	2 Gallon Kit	SCS-ASP3000-256
10 Gallon Kit	SCS-ASP3000-1280kit	10 Gallon Kit	SCS-ASP3000-1280kit

COLORS:

PC Poly Solid Colors - 16 Standard Colors available separately

POTLIFE & CURE TIMES:

**Higher temperatures and humidity will shorten pot life.*

Temperature / Humidity	55°F (50% Humidity)	72°F (50% Humidity)	85°F (50% Humidity)
Pot Life	60 minutes	30 minutes	20 minutes
Working Time	45 minutes	30 minutes	10 - 12 min.
Tack Free	4 - 6 hours	2 - 3 hours	90 - 120 min.
Recoat Window	6 - 24 hours	3 - 24 hours	2 - 24 hours
Foot Traffic	±16 hours	±8 hours	±5 hours
Heavy Traffic (Vehicular/Forklift)	±72 hours	±36 hours	±20 hours
Max. Chemical Resistance	6 - 7 days	3 - 4 days	±3 days

CURED COATING PROPERTIES (DRY FILM):

Property	Test Method	Results
Abrasion Resistance, mg/loss* Taber Abraser	ASTM D4060	50 mg loss
Volatile Organic Compounds (VOC'S)	ASTM D3960	<2 g/L
Hardness (Pencil)	ASTM 3363	F
Impact	ASTM D2794	160 in.lbs. Direct & 120 in.lbs. Reverse
Tensile Strength, psi (MPa)	ASTM D2370	6,526 psi (45 MPa)
Conical Mandrel Elongation	ASTM D522	50% (Pass)
Gloss	60 degree	90 (±5)
Viscosity (Mixed)	ASTM 2196	148 cP
Flash Point (Liquid State)	ASTM 3278	145°F (62.8°C)
Volume Solids	ASTM D2196	±76% (3000) ±53% (3550)

*CS-17 Taber Abrasion Wheel, 1,000 gram load, 1,000 revolutions Results are based on conditions at 77°F (25°C), 50% relative humidity

APPROXIMATE COVERAGE PER MIXED GALLON:

Coverage varies due to application thickness, texture & absorption of concrete.
Coverage Equation: $1604 \div \text{millage} = \text{Wet Film Thickness} \times 0.76 = \text{Dry Film Thickness}$

Mil Thickness WFT (DFT)	Approximate Coverage per mixed gallon
2 mils WFT 3000 = 1.52 mils DFT 3500 = 1.06 mils DFT	802 sq.ft./gal
3 mils WFT 3000 = 2.28 mils DFT 3500 = 1.59 mils DFT	534 sq.ft./gal
4 mils WFT 3000 = 3.04 mils DFT 3500 = 2.12 mils DFT	401 sq.ft./gal
5 mils WFT 3000 = 3.80 mils DFT 3500 = 2.65 mils DFT	321 sq.ft./gal



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 2-COMPONENT SPRAY GRADE **Gloss** 2-COMPONENT SPRAY-GRADE FORMULA **Low Sheen**

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TYPICAL CHEMICAL & STAIN RESISTANCE

Covered Spot Test - 3 mil film at 7 day cure:

E – Excellent; G – Good (slight sign of exposure/stains, coating recovers);
 D – Discolored / Stain; NR – Not Recommended (Permanent Damage)

24 hour Exposure

ACIDS

Acetic Acid 25% (Vinegar)	E
Citric Acid 10%	E
Lactic Acid 88%	G
Phosphoric Acid 85%	D
Sulfuric Acid 25% (Battery Acid)	E
Sulfuric Acid 98%	NR
Hydrochloric Acid 32% (Muriatic)	E
Nitric Acid 67%	NR

BASES

Ammonium Hydroxide 10%	E
Sodium Chloride 20%	E
Sodium Hydroxide 50%	E
Sodium Hypochlorite (Bleach)	E
Trisodium Phosphate 10%	E

ALCOHOLS

Ethylene Glycol (Antifreeze)	E
Isopropyl Alcohol 91%	E
Methanol	E
Hand Sanitizer (Purell)	G

SOLVENTS

Acetone	G
d-Limonene	E
MEK	G
Methylene Chloride	G
Mineral Spirits	E
PGMEA	G

HYDROCARBONS

Brake Fluid	G
Transmission Fluid	E
Motor Oil	E
Kerosene	E
Hydraulic Fluid	E
Skydrol® – LD-4	D

MISCELLANEOUS

Coffee	E
Coke®	E
Dish Detergent (Dawn®)	E
Hydrogen Peroxide 3%	E
Ketchup	E
Monster Energy® Drink	E
Mustard	E
Povidone-iodine (BETADINE®)	D
Tide® 1%	E
Windex® (Ammonia Based)	E
Wine – Red	E

LIMITATIONS:

- AVOID applying while humidity is greater than 80% during installation
- HEAVY TEXTURE SURFACES - Use a ½" to ¾" nap roller cover when applying over heavy texture surfaces, such as knockdown overlays or heavy stamped patterns, while ensuring no puddling remain
- As best practice, apply a thin primer coat (@ 5-7 mils / 230-320 sq.ft. per gallon) when installing directly to bare concrete, pavers and over porous substrates to avoid air bubbles from becoming trapped in the in the coating film while curing
- When applying over metal, 2 to 3 coats (3 to 5 mils DFT) are recommended in order to achieve proper corrosion and abrasion resistance
- DO NOT APPLY directly to metal in direct sunlight exposure at the time of application to avoid baking, bubbles or flash curing
- DO NOT INSTALL when the Dew point is within ±5° of the temperature

POT LIFE: *See chart on Page 1. Pot life will depend on local humidity conditions and the length of time the coating is exposed to moisture.

Smith's Polyaspartic 3000 series are a Moisture-Cured coating and will cure faster in higher temperature and/or humidity environments. For best end results, use install in moderate to dry atmospheric conditions with less than 80% Ambient Relative Humidity at time of application.

MOISTURE TESTING: Testing concrete moisture via both the Calcium chloride (ASTM F1869) and In-situ Relative Humidity (ASTM F2170) methods is highly recommended to accurately determine both the Moisture Vapor Emission Rate (ASTM F1869) and the available Moisture Content (ASTM F2170) at the time of testing. Follow the testing manufacturer's instructions precisely or visit www.astm.org, see ASTM F1869 or F2170, to purchase the test methods. Testing MUST occur within an acclimated, interior environment for the results to be valid and conclusive.

*See product data sheets for [Smith's Epoxy MAC100](#) or [Epoxy MAC125](#), regarding Osmotic moisture vapor emission reduction priming when necessary.

For Wooden substrates, no greater than 12% is recommended prior to coating when using a wood substrate moisture meter.

*Smith Paint Products is strictly a product manufacturer and does NOT offer any testing or analysis but may be able to offer guidance to an appropriate testing lab or third party inspector. When in doubt, hire a qualified third party testing firm.

**Smith Paint Products is not responsible for failures due to the presence of moisture vapor emissions nor high levels of alkalinity.

SUBSTRATE CONTAMINATION: Concrete is porous and can become contaminated with oils, chemical from spills, etc. which act as a bond breaker. Determine if a potential bond breaker exists and a proper course of remediation.

OIL CONTAMINATION: [Smith's Oil Clean](#) may be used to remove oils, such as petroleum, synthetic and food oils, from the surface of the concrete prior to mechanical preparation. Remove and replace wooden substrates contaminated with oil with new exterior grade or marine grade wood subflooring.

CHEMICAL CONTAMINATION: Chemical contamination should be determined and may require additional testing. Once the type of contaminant is determined, contact Smith Paint Products for recommendations while following local regulations regarding contaminant and disposal.

PRECAUTIONS / WARNING (*See SDS for details):

Contains Solvent - Material is Combustible

- Extinguish all flames and avoid sparks, heat, open flames & electric motors until all vapors are gone and coating is hard
- Use with adequate ventilation when mixing, applying & curing
- Product emits harmful vapors during application which can cause respiratory irritation
 - Individuals with chronic lung or breathing problems or negative reaction to isocyanates, should not use this product

PERSONAL PROTECTION EQUIPMENT RECOMMENDED:

- Use of a self-contained respiratory equipment (TC 19C NIOSH/MESA)
 - Avoid inhaling atomized spray & fumes
- Wear Chemical Resistant Gloves – Avoid all contact with skin
- Wear Chemical Resistant Eye Protection – Prevent contact with eyes

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INSPECT THE SUBSTRATE: Ensure the concrete is structurally sound and solid as well as free of any contaminants that may act as a bond breaker, such as oil, paint, densifier/sealers, curing compounds, wax, silicone, etc.

TEMPERATURE and HUMIDITY: Substrate temperature and materials must be maintained between 40°F (4.4°C) and 85°F (29.4°C) with less than 80% Ambient Humidity for 24 hours prior to and 24 hours after installation.

*Do Not Install coatings when the Dew point is within 5° of the temperature



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Plastic Sheeting or Ram Board to cover floor for mix station

- Jiffy mixing paddle
- Self-contained respiratory equipment/mask (TC 19C NIOSH/MESA)
- Low speed ½" drill (Variable Speed 450 rpm or less) with paint mixing paddle
- Mixing Pails
- Paint Measuring Cups
- Masking Tape
- Cleaning Solvent (Acetone, MEK, Xylene)

NOTE: Mix station & all application equipment should be ready for immediate use prior to mixing any product. Higher temperatures & humidity will shorten pot life.

SUBSTRATE PREPARATION

Please carefully read and understand the following directions before you begin your project. These directions are meant to be general guidelines only and DO NOT cover every application or environmental situation. Should any remaining questions or concerns existing after thoroughly reviewing these instructions, please call Smith Paints toll-free for technical assistance at 1-800-466-8781.

Please note that preparation is key to adhesion regardless of the coating type. Surface contaminates and/or corrosion inhibit any coating from appropriately anchoring itself to the surface.

PREPARING METAL – Metal may be mechanically or chemically etched to achieve a lightly profiled surface then cleaned to remove any residue oils and contaminants that may inhibit adhesion or cause fish eyes in the coating film.

PRECAUTION – Plastic Media, Soda Blasting, Bead-blasted, etc. methods do not achieve enough of a profiled surface and will require additional chemical etching to properly adhere the coating to the metal.

CLEANING: Scrape off all dirt, debris, loose paints, oils, etc. using a bristle brush to help remove contaminants from the surface. Repeat if necessary.

Different types of cleaners are used depending on the type of surface contaminant.

New metals have oils on the surface to limit corrosion which need to be fully removed in order to ensure proper adhesion to the metal surface.

Oils – Wash the surface with either [Smith's Oil Clean](#) and thoroughly rinse with warm, potable water and allow to dry. Use a dilution rate most effective for the degree of contamination, see [Smith's Oil Clean](#) product data sheet for more detailed instructions.

Solvent cleaners, such as Acetone, Xylene, or MEK, are usually used on small surface areas and offer limited ability to remove difficult oils. Automotive Brake Parts Cleaner spray may also be used for small, isolated metal cleaning prior to mechanical preparation.

Surface Oxides – Acidic cleanser are more efficient for removing inorganic soils such as surface oxides.

Organic Soils – High Alkalinity detergents, such as [Smith's CT-8](#), efficiently remove organic soils but may require agitation using a brush to loosen and lift the soil from the metal surface followed by a thorough clean water rinse.

Rinse thoroughly with warm, potable water and allow to sufficiently dry.

Once soils have been removed from the metal surface, any surface corrosion will need to be addressed.

Rust scale should be removed with a scraper prior to wire brushing or sand blasting. Once the scale is removed, the surface must be solvent washed or use an automotive Brake Parts cleaner for small, isolated rinsing.

New / Smooth / Shiny Metal Surfaces – Once all oils/soils have been thoroughly removed, lightly scuff the metal surface with 200 to 400 grit sandpaper followed by a Zinc Phosphate treatment. Also, ensure any welding scale has been removed.

Older Metal Surfaces – Sandblasting is the most ideal preparation method to prepare metal surfaces prior to coatings. Although other blasting media will remove paints and soils, other media blasting such as plastic media, bead or soda-blasted treated surfaces do not provide the adequate surface profile necessary and will require further metal etching. Ensure all rust scale is removed.

Grinding can be utilized for preparation but requires attention to detail while preparing metal.

Flash corrosion of certain types of metals, such as Aluminum, begins immediately after cleaning. Corrosive metals should be pretreated with a Zinc Phosphate system as soon as the soils and corrosion have been removed to ensure proper coating adhesion. Zinc Phosphate leaves a white powder corrosion resistant residue behind for ideal performance.

Alloys / Non-Ferrous Metals – Due to the wide variations with these types of metals, minimize the application times and dilution rates of Zinc Phosphate Pretreatments to avoid damaging the metal.

If desired, fill any cracks or pits with an appropriate epoxy auto body filler.

PREPARING EXISTING COATINGS – Adhesion to any existing coating system is only as good as the adhesion the existing coating system has to its substrate. Always test to determine the suitability of an existing substrate and mock-ups are highly encouraged.

Loose coatings and paint must be removed down to a sound, solid substrate. Always test an inconspicuous area for compatibility between the existing coating and Smith's Polyaspartic 3000/3550 prior to proceeding with the entire project. It is highly recommended to perform an adhesion tape test to ensure an appropriate bond is attainable.

Well bonded coatings and paint can be cleaned with [Smith's Neutral Detergent](#), [Smith's Green Clean Pro](#), TSP or similar detergent then lightly abraded to create a texture similar to 80 - 100 grit sand paper.

Always allow coatings and the surface(s) to be coated to acclimate to room temperature before beginning.

OVER SMITH'S COLOR FLOOR STAIN – Once [Smith's Color Floor stain](#) has cured overnight, Smith's Polyaspartic 3000/3550 may be applied directly over the stain. For best results, apply 5 to 8 mils or a spread rate of 200 to 321 square feet per mixed gallon. A slightly rough, orange peel like finish should be expected when back-rolled (>200 sq.ft. per gallon).

PRIMING: [Smith's Poly-SB/G](#) may be used for priming and is recommended over difficult to bond to metals such as Aluminum, Magnesium, etc. [Smith's Poly-SB/G](#) may be tinted using Smith's ISC Solid Color Packs at 10% by volume to mixed Poly-SB. [Smith's Poly-SB/G](#) is supplied as a 2-component "ready-to-use" primer with no further thinning necessary for spray applications.

Apply Smith's Poly-SB in thin coats. **DO NOT APPLY thicker than 300-400 sq.ft. per mixed gallon (5 mils WFT) in a single layer to avoid fogging or a blotchy appearance in the film, even when applying over horizontal surfaces.**



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MIXTURE: Premix the Part A for approximately 1 minute using a clean, paint mixing paddle on a low RPM drill (<450 RPM). If part mixing, measure equal parts by volume (1 Part A to 1 Part B) and mix in a clean 5 gallon plastic pail using a paint mixing paddle attached to a slow speed drill (<450 RPM) for 1-2 minutes. If a solid color is desired, add 1 unit of Smith's PC Poly Solid Colorant Packs to 2 gallons of mixed Smith's Polyaspartic 3000/3550 and mix for an additional minute.

NOTE:

- Hand Mixing is NOT Recommended
- DO NOT TURN THE MIXING VESSEL UPSIDE DOWN ON THE SUBSTRATE allowing the residual product to drain onto the floor there is a risk of unmixed or non-thoroughly catalyzed product contaminating the flooring system

SPRAY APPLICATION: Smith's Polyaspartic 3000 series products are formulated to be applied via a dual component sprayer (preferred) or gravity feed spray gun as outlined in CFI Bulletin G-2. Once thoroughly mixed, pour the desired amount into the cup attached to the gun.

Atomize material with roughly 20 lbs. of pressure in conjunction with 1.8 mm tip. Other tips can be used, decrease pressure if excess overspray occurs. Clean gun with solvent immediately.

Moisture cannot be present when applying Smith's Polyaspartic 3000 series products. Even though your spraying system may have moisture traps and filters, condensation may occur in the hose downstream and ruin your paint job. A spray gun line filter is highly recommended to reduce any atomized oils and moisture from the line that could cause imperfections.

CUP GUN SPRAYER – Most cup guns will have two control knobs. The upper, which is the fan control and the lower which is the fluid control. For your initial setup, turn both of these so that they are fully in the closed position. Connect the air and set the regulator to the recommended pressure as stated by the cup gun manufacturer. Both the fan control and the fluid control can be fully adjusted as you see fit, but for now it is a good idea to start with both of these backed out until you see the first thread.

While spraying against a test object, such as a piece of card board, adjust the fan knob out (counter clock-wise) until you get a nice long fan shape of around 8-10 inches. Watch to see how much fluid is coming out until an even wetness is achieved. If an uneven, spotty or dry looking finish is observed, open up the fluid knob in full turn increments to get close and then dial it in from there. Keep in mind, too far and the paint will be spraying too thick which will create runs or sags in the finish.

Spray in 2 to 3 thin even coats at a rate of 400 sq.ft. per gallon (100 sq.ft. per quart) allowing to dry to a tack free film between coats.

Airless Equipment	Gun	Fluid Tip	Gun Pressure	Temp.	Pattern
Binks 98 Series	39/43	9-1860	2000 to 2200 psi	Ambient	12" to 14"
DeVilbiss 4711	JGA-5026	JAC-31	2000 to 2200 psi	Ambient	12" to 14"
Grayco Hydra-Spray	Standard	163-617	2000 to 2200 psi	Ambient	12" to 14"
Nordson	Standard	20C09	2000 to 2200 psi	Ambient	16" to 18"
Gunjet	25A	650050TC	2000 to 2200 psi	Ambient	12" to 14"

Normal Spray Equipment	Gun	Nozzle	Fluid Needle	Air Cap
Binks	18	66 or 63C	65 or 63A	63PB
DeVilbiss	MBC 510	E or FF	E or FF	765
DeVilbiss	JGA 502	E or FF	E or FF	765

SLIP RESISTANCE: Smith Paint Products recommends the use of angular slip-resistant aggregate in all floor coatings that may be exposed to wet, oily or greasy conditions as well as any condition where increased traction may be necessary. It is the contractor and end users' responsibility to determine the appropriate traction needs and footwear necessary for the conditions as well as setting performance parameters prior to beginning the application, testing to determine parameters have been met upon completion to achieve the end users documented safety standards.

Mock-ups are highly recommended as part of the evaluation process to determine the appropriate amount of slip-coefficient necessary for the environment.

LIMITED LIABILITY: Liability is limited to replacement of defectively manufactured product of the same type and cost of the originally purchased product upon presentation of a valid, fully paid invoice at the time of a claim. No warranty shall be granted for outstanding invoices or for accounts with unpaid balances until paid in full. No damages, whether consequential, liquidated or other, shall be provided under this Limitation of Liability and Limited Warranty. Should a product defect be suspected at the time of application, cease use of the product immediately and notify Smith Paint Products for investigation as you will be responsible for the cost to repair or replace any work performed with product(s) suspected of defect. Record batch codes and save all products you purchased in order for any warranty to occur allow with the invoice that matches said quantity. Defects determined after installation must be reported to Smith Paint Products within 10 business days of discovery.

Upon information, belief and to the best of our knowledge, the information contained herein is true accurate as of the date of issuance of this particular document and any and all information conveyed, whether expressed or implied. Is subject to change without prior notice. We guarantee our products to conform to Smith Paint Products quality control standards, but not to any other standards unless specifically stated in written documentation. Smith Paint Products assumes no liability for coverage, performance, injury results from use, misuse or usage not described in any promotional materials or regulatory infraction determined by using our products. The applicator assumes all liability for use and local regulatory compliance. Promotional materials are not a supplementation to any product purchase agreement, nor should such documents be considered a type of contract, if any is reduce to writing.

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SUGGESTED SPRAY EQUIPMENT & SETTINGS



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