

PRODUCT DESCRIPTION

FP POLY SHIELD 5040 is a two-component, high-solids, VOC-compliant aliphatic polyaspartic developed as a UV-stable protective topcoat. Its extended working time supports efficient installation while producing a durable, high-gloss finish with excellent chemical, solvent, abrasion, and weather resistance. FP POLY SHIELD 5040 offers strong adhesion to properly prepared substrates and compatible coatings, making it suitable for demanding commercial, industrial, marine, and decorative flooring applications.

KEY BENEFITS

- Extended 35-45 minute working time
- Non-yellowing with good gloss retention
- Superior chemical and solvent resistance
- Excellent weather and abrasion resistance
- Easy 1A:1B mix ratio by volume
- Low odor for interior application

PRIMARY APPLICATIONS

- UV-stable floor topcoats
- Aircraft hangars and maintenance facilities
- Industrial floors, car washes, and wash bays
- Marine, offshore, and secondary containment
- Bridges, cooling towers, and wastewater facilities
- Fiberglass, steel, concrete, and wood protection

PACKAGING AND TECHNICAL DATA

Property	FP POLY SHIELD 5040
Kit Size	2 US gallon kit
Components	Part A: 1 gallon Part B: 1 gallon
Color	Upon request
Mix Ratio by Volume	1A : 1B
Recommended Thickness	Primer: 5-10 mils DFT Finish coat: 6-10 mils DFT
Coverage	Approximately 150-350 sq. ft. per gallon, depending on thickness and surface profile
Pot Life at 77°F	40-50 minutes
Working Time at 77°F	35-45 minutes at approximately 40% relative humidity
Tack-Free Time at 73°F	6-8 hours at approximately 12% relative humidity
Solids Content	Mixed: 98.5% by weight and volume
VOC	28 g/L
Mixed Viscosity at 77°F	300-400 cP
Shelf Life	12 months unopened; protect from moisture, sunlight, heat, cold, and ignition sources

PHYSICAL PROPERTIES

Property / Test Method	Typical Result	Property / Test Method	Typical Result
Adhesion to Primed Concrete - ASTM D4541	>500 psi (substrate rupture)	Gloss - ASTM D523	95+
Water Absorption - ASTM D570	0.2%	Coefficient of Friction - ASTM D1894	0.5-0.7
Water Vapor Transmission - ASTM E96	1 perm	Tensile Strength - ASTM D638	7,000-8,000 psi
Abrasion Resistance - ASTM D4060	30 mg loss (CS17, 1000 g, 1000 cycles)	Compressive Strength - ASTM D695	9,000-10,000 psi; with quartz: 13,700 psi; with chips: 12,200 psi
Hardness - ASTM D2240, Shore D	75-78	Elongation at Break - ASTM D638	100-110%
Flexibility - ASTM D1737	Pass, 1/8-inch mandrel	Tear Strength - ASTM D2240	350 pli
Falling Sand Abrasion - ASTM D968	45 L sand per 1 dry mil	Fire Rating - ASTM E84	Flame spread: 5 Smoke developed: 94 (Class A)*

*Fire-rating values are estimated from a similar coating. Typical values are laboratory results and are not guaranteed specifications. Porous or imperfect surfaces may require additional material, and added colorant may affect viscosity.

FP POLY SHIELD 5040

APPLICATION, CURING & SAFETY INFORMATION

TECHNICAL DATA SHEET | CONTINUED

CURING DETAILS

Temperature	Foot Traffic	Light Traffic	Full Cure	Recoat Minimum	Recoat Maximum
50°F	3 days	7 days	10 days	1 day	2 days
68°F	6 hours	12 hours	7 days	6 hours	12 hours
86°F	4 hours	8 hours	5 days	4 hours	8 hours

SURFACE PREPARATION

Existing Concrete. The surface must be clean, sound, dry, and mechanically prepared by shot blasting, abrasive blasting, or diamond grinding. Remove all oils, sealers, curing compounds, waxes, fats, laitance, and other bond-breaking contaminants. Do not apply to wet substrates. Check chloride, moisture, and pH conditions before application. Apply FP POLY SHIELD 5040 over a compatible Florida Polymer epoxy primer. Repair cracks and surface imperfections before coating.

New Concrete. Allow new concrete to cure for a minimum of 30 days. Concrete should achieve at least 3,625 psi compressive strength after 28 days and at least 218 psi tensile pull-off strength. Mechanically prepare the surface to remove laitance and create the profile required for the coating system. Prime porous surfaces and repair cracks or imperfections before application.

MIXING

Pre-condition materials to at least 59°F before use. Mix each component separately for a minimum of 2 minutes to evenly suspend solids. Pour Part B into Part A at the required 1A:1B volume ratio and mix for at least 3 minutes with a low-speed drill at 300-450 rpm. Scrape the bottom and sides of the container at least once to ensure a homogeneous blend. Mix only the amount that can be installed within the available pot life.

APPLICATION

Apply the mixed product evenly to the prepared surface using a rubber squeegee or gauge rake, then back-roll to obtain a uniform coating. Avoid puddles and excessive build-up.

CLEANING

Clean tools and equipment immediately with a cleaner suitable for polyaspartic materials. Wash exposed skin carefully with warm, soapy water. Once cured, the product can be removed only by mechanical means.

OVERLAPS AND APPLICATION NOTES

Apply overlaps while the primer remains wet or tacky. If it has dried, re-prime before continuing. Porous substrates may require additional primer. Aggregate may be broadcast lightly into the wet primer to improve footing when appropriate for the specified system.

RESTRICTIONS

- Substrate temperature must remain between 59°F and 86°F during application and curing.
- Maximum relative humidity during application and curing is 85%.
- Substrate moisture content must be below 4% when the coating is applied.
- Do not apply to porous surfaces where moisture transmission may occur during application.
- Protect from moisture, condensation, and water during the first 24 hours of cure.

HEALTH AND SAFETY

Avoid skin and eye contact and do not breathe vapors. Wear safety glasses, chemical-resistant gloves, protective clothing, and appropriate respiratory protection when ventilation is inadequate. Use only in a properly ventilated area. In case of skin contact, wash with soap and water. For eye contact, rinse immediately with water for at least 15 minutes and obtain medical attention. If respiratory irritation occurs, move the affected person to fresh air. Consult the Safety Data Sheet before use.

IMPORTANT NOTICE

This information is believed accurate and applies only to the identified material. The user must confirm suitability, perform job-site testing, and follow the current Safety Data Sheet and application instructions. Florida Polymer Products Corp. assumes no liability for direct, indirect, consequential, economic, or other damages beyond product replacement or refund as provided in the applicable purchase agreement.

CHEMICAL RESISTANCE

Results reflect testing at approximately 77°F. Actual performance may vary with concentration, exposure time, temperature, film thickness, and service conditions.

Chemical	Result	Chemical	Result
Acetic Acid 100%	C	Sodium Chloride Solution 10%	R
Acetone	C	Nitric Acid 20%	NR
Ammonium Hydroxide 50%	RC	Phosphoric Acid 10%	R
Benzene	C	Phosphoric Acid 50%	NR
Saturated Brine	R	Potassium Hydroxide 10%	R
Chlorinated Water	R	Potassium Hydroxide 20%	R, Dis
Bleach Solution 10%	R	Propylene Carbonate	RC
Diesel Fuel	RC	Skydrol	C
Gasoline	RC	Sodium Hydroxide 25%	R
Gasoline / 5% MTBE	RC	Sodium Hydroxide 50%	R, Dis
Gasoline / 5% Methanol	RC	Sodium Hypochlorite 10%	R
Hydrochloric Acid 20%	R	Sodium Bicarbonate	R
Hydrochloric Acid 10%	NR	Stearic Acid	R
Hydraulic Fluid	RC	Sugar Solution	R
Isopropyl Alcohol	R	Sulfuric Acid 10%	R
Lactic Acid	RC	Sulfuric Acid >50%	RC
MEK	RC	Toluene	R
Methanol	R	1,1,1-Trichloroethane	C
Methylene Chloride	C	Trisodium Phosphate	R
Mineral Spirits	RC	Vinegar Solution 5%	R
Motor Oil	R	Water	R
MTBE	C	Water - 14 days at 180°F	R
Muriatic Acid 10%	R	Xylene	RC

R = Recommended; little or no visible damage RC = Recommended conditionally; some effect, swelling, or discoloration C = Conditional; clean within one hour of spillage NR = Not recommended Dis = Discoloration