EZ 22-PAS
Polyurethane Acrylic Primer / Sealer

Product Data Sheet

623 Chatsworth Hwy 225 Calhoun, GA 30701 706.403.3286 lamininindustries.com

DESCRIPTION:
Laminin EZ 22-PAS is a single component, fast drying, waterborne polyurethane polymer fused with a cross-inking acrylic which achieves a tenacious bond to approved substrates, with very good resilience, longevity, UV stability and wear.

EZ 22-PAS may be used as a primer for interior and exterior direct-to-concrete applications prior to EZ 22-PAS topcoat, as a seal coat to lock down Vinyl Chip prior for residential garage floor systems, finish for Terrazzo as a replacement for traditional floor wax in addition to a standalone architectural and decorative concrete sealer for concrete overlays, Stucco, pavers and more.

RECOMMENDED USES:
- Primer for:
  - Laminin's EZ 22-WPS (over bare concrete)
- Seal Coat prior to high solids Polyurethanes for:
  - Vinyl Chip Systems (Residential Garage floors only)
- Terrazzo Sealer*
- Bonds to:
  - Concrete, Stucco & Polymer Modified Overlays
  - Pavers
  - Concrete Stains & Dyes (i.e. Smith's Color Floor & Smith's Liquid Dye)
  - Terrazzo (Cementitious & Epoxy)
  - Vinyl Chip (Neat, unsealed prior to topcoat of Smith's Poly WB)
  - Wood Subfloors (underlayment grade plywood or OSB)

HIGHLIGHTS:
- Ready-to-Use
- Alkali-Resistant
- Fast Drying
- Tenacious Bond
- Low Odor & Low VOC's
- Infinite inter-coat adhesion
- UV Stable - Non-yellowing
- Good Blush Resistance
- Resists to Hot Tire Pickup (Residential Traffic only)

STORAGE:
Indoors between 40°F (4.5°C) - 90°F (32.2°C)

INSTALLATION TEMPERATURE RANGE:
50°F (10°C) to 100°F (37.8°C) with 20% to 90% Ambient Relative Humidity
**Substrate temperatures between 50°F to 65°F will significantly slow the cure rate.*

SHELF LIFE:
1 Year in original, unopened containers. Use within 30 days of opening

AVAILABLE KIT SIZES:
EZ 22-PAS128 1 Gallon Jug
EZ 22-PAS-640 5 Gallon Pail

COLORS: Gloss, Clear – *Colors are made-to-order only*

POTLIFE & CURE TIMES (72°F / 50% Relative Humidity):
**Cure time is effected by temperature and humidity.*

Pot Life	N/A
Tack Free	15 to 30 minutes
Recoat (for Smith's Poly WB)	As soon as 15 to 30 min.
Foot Traffic	60 to 90 minutes
Heavy Traffic	36 hours
Full Cure	24 hours

CURED COATING PROPERTIES (DRY FILM):

Property	Test Method	Results
Abrasion Resistance *mg/loss* *Taber Abraser	ASTM D4060	75 mg
Adhesion to Concrete	ASTM D4541	Concrete Fails
Flammability	ASTM D635	Self-Extinguishing
Flash Point		>212°F (100°C)
Gloss	60 degree	70 (±5)
Viscosity – Mixed	ASTM 2196	25 cPs
Volatile Organic Compounds (VOC'S)	ASTM D3960	99 g/L
Volume Solids (Mixed)	ASTM D2196	25%

APPROXIMATE COVERAGE (DRY FILM):
Coverage will vary depending on the application thickness, floor profile and absorbency of the substrate.

Application	Approximate Yield *per unit per square foot*	
	1 gal jug	5 gal pail
Primer	225-275 sq.ft.	1,125-1,375 sq.ft.
Stain Sealer	250-300 sq.ft./coat	1,000-1,250 sq.ft/coat
Terrazzo (using microfiber mop)	600-1,000 sq.ft.	3,000-5,000 sq.ft.
Vinyl Chip seal coat	200-250 sq.ft.	1,000-1,250 sq.ft.

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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, coating recovers);*
***NR** - Not Recommended (Permanent Damage)*

	4 hour	24 hour
ACIDS		
Acetic Acid 25% (Vinegar)	E	G
Citric Acid 10%	E	E
Lactic Acid 88%	G	G
Phosphoric Acid 85%	NR	NR
Sulfuric Acid 25% (Battery Acid)	NR	NR
Sulfuric Acid 98%	NR	NR
Hydrochloric Acid 32% (Muriatic)	NR	NR
Nitric Acid 67%	NR	NR
BASES		
Ammonium Hydroxide 10%	NR	NR
Sodium Chloride 20%	NR	NR
Sodium Hydroxide 50%	NR	NR
Sodium Hypochlorite (Bleach)	NR	NR
Trisodium Phosphate 10%	G	NR
ALCOHOLS		
Ethylene Glycol (Antifreeze)	E	G
Isopropyl Alcohol 91%	G	NR
Methanol	E	G
Hand Sanitizer (Purell)	G	NR
SOLVENTS		
Acetone	NR	NR
d-Limonene	E	G
MEK	NR	NR
Methylene Chloride	NR	NR
Mineral Spirits	E	G
PGMEA	G	NR
HYDROCARBONS		
Brake Fluid	G	NR
Transmission Fluid	E	G
Motor Oil	E	E
Kerosene	E	G
Gasoline	E	G
Hydraulic Fluid	E	NR
Skydrol – LD-4	NR	NR
MISCELLANEOUS		
Coffee	E	E
Coke®	E	E
Dish Detergent (Dawn®)	E	E
Hydrogen Peroxide 3%	G	NR
Ketchup	E	E
Monster Energy® Drink	E	E
Mustard	E	G
Tide® 1%	E	E
Windex® (Ammonia Based)	G	NR
Wine – Red	E	G

Coke® is a registered trademark of Coca-Cola. Monster Energy® is a registered trademark of Monster Energy Co. Skydrol® is a registered trademark of Eastman Chemical. Dawn® & Tide® are registered trademarks of Proctor & Gamble. Windex® is a registered trademark of S.C. Johnson & Son, Inc.

LIMITATIONS:

- Do not use on non-porous surfaces, such as Ceramic or Porcelain tiles, Marble, Granite, etc. The specifier and user shall determine the suitability and assumes all responsibilities therewith
- When applying solvent-based topcoats/sealers over EZ 22-PAS, apply an overnight cure to ensure all cross-linking occurs prior to solvent exposure
- Avoid exposing freshly applied EZ 22-PAS to air movement, direct sunlight, freezing, water and direct sources of heat (i.e. radiant in-floor heat)
- For exterior, immersion, and wheeled traffic conditions, a minimum of an ICRI CSP 2 profile is required for mechanical preparation
- NOT intended for use as a wood floor sealer
- NOT for use in kitchen environments at risk of thermal shock

TEMPERATURE and HUMIDITY: Substrate temperature, air and materials must be maintained between 50°F (10°C) and 100°F (37.8°C) with less than 90% Ambient Humidity during application.

- DO NOT INSTALL when the Dew Point is within ±5° of the air temperature

INSPECT THE SUBSTRATE: Ensure substrate is sound/solid, free of any contaminants that may act as a bond breaker, such as oil/grease, loose paint/coatings, wax, silicone, etc.

CHECK FOR MOISTURE:

Exterior Concrete - concrete must dry and new concrete must cure for at least 10-14 days to allow all bleed water/water of convenience to escape and for concrete to harden enough to allow appropriate preparation for the system desired. Follow the moisture recommendations for the full system intended.

Interior Substrates - Testing of moisture vapor transmission is required via Calcium Chloride (ASTM F1869) or In-situ Relative Humidity (ASTM F2170) methods to determine the Moisture Vapor Emission Rate (ASTM F1869) or the available Moisture Content (ASTM F2170) at the time of testing. Follow testing manufacturer's instructions precisely or visit www.astm.org, see ASTM F1869 or F2170, to purchase test methods. Testing MUST occur within an acclimated, interior environment for valid/conclusive results. Following the underlaying resinous system/layer requirements regarding moisture vapor transmission.

Laminin Indusrries 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.

CONTAMINATION OF SUBSTRATE: 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. Contact Laminin Industries for remedial recommendations while following local regulations regarding contaminant and disposal.

NECESSARY TOOLS & EQUIPMENT:

- Plastic Sheeting or Ram Board to cover floor for mix station
- Paint stir stick
- Premium, Non-Shed Paint Roller Covers (Roller Size Varies based on application)
- Paint Roller Frame with Extension Pole
- Cleaning Solvent (Water While Wet)
- Masking Tape
- Microfiber mop or T-Bar (for sealing Terrazzo only)
- Pump Sprayer or HVLP Sprayer (for exterior decorative concrete sealing)

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

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SUBSTRATE PREPARATION

NOTE: During application in environments using temporary heat, make sure to exhaust emissions and toxic fumes from temporary heaters to the exterior of the building to prevent health hazards and damage to work. Many temporary heating methods emit unburned petroleum into the air which act as a bond breaker once it falls onto the surface of the substrate.

- Precautions must be taken when using LP, gasoline, diesel, etc. fueled temporary heat
- Always shut off temporary heat at least 2-3 hours prior to application of EZ 22-PAS to reduce risk of airborne petroleum contamination
- Always clean the mechanically prepared surface using an auto-scrubber followed by a thorough clean water rinse when temporary heat has been in use
- Fisheyes are a result of surface contamination & insufficient cleaning

Follow the preparation method recommended for the full system or high solids coating to be applied over EZ 22-PAS.

DIRECT-TO-CONCRETE SEALING: Achieve a ≥CSP 2 *(Concrete Surface Profile in accordance with ICRI Guideline 310.2R2013, as published by the International Concrete Repair Institute)* yielding a surface texture similar to 100 grit sand paper or more course in order to maintain long term adhesion to the substrate. If topcoating with a high solids sealer or a high build coating system, follow the preparation method recommended for the system or high solids coating.

Remove all curing compounds thoroughly prior to desired preparation method.

Recommended preparation methods below:

NOTE:

- ***Diamond Grind*:** Use 40 to 100 grit metal bond diamonds with an appropriate industrial, weighted head diamond floor grinder to thoroughly

- *DO NOT USE* MURIATIC/HYDROCLORIC ACID TO PREPARE CONCRETE AS CHLORIDE CONTAMINATION MAY OCCUR
- *DO NOT USE* on *"Green"* concrete *(less than 30 days old), Hard Trowel Finished* concrete or *previously sealed/coated/painted concrete* to including any type of curing compound

Key in all termination points using a diamond cutting blade prior to any above preparation method.

Please refer to ICRI Guideline 310.2R2013 for more in-depth preparation details and recommendations.

PRIMER FOR POLYURETHANE & POLYASPARTIC: Once prepared, prime the concrete with EZ 22-PAS at a rate of 225-275 sq.ft. per gallon using an appropriate nap non-shed roller for the concrete texture:

Suggested Roller Nap:

Flat/Even Surfaces	1/4" to 3/8" Nap
Irregular Surfaces (Knockdown Overlays, Stucco)	3/8" to 1/2" Nap

Roll out EZ 22-PAS evenly across the surface and avoid puddling. Higher absorbency substrates may require 2 coats of prior to avoid pinholes in the final topcoat finish.

INITIAL SEALER FOR VINYL CHIP: After scraping and vacuuming off the loose Vinyl Chip from the base broadcast, use EZ 22-PAS to touch-up any thin flake areas where too much color from the base is showing using a chip brush or a trim roller and lightly rebroadcast the repaired areas. Wait 15-20 minutes for the touch-up to cure then vacuum to remove and loose Vinyl Chips. Wait another 15 minutes to cure (total of 30 minutes since touch-ups initiated).

Using the dip-and-roll method, apply EZ 22-PAS using a 3/8" to 1/2" premium, non-shed paint rolling at a rate of 200 to 250 sq.ft. per gallon. Topcoating with EZ 22-WPS may proceed when EZ 22-PAS is dry with no whitish or tacky areas remaining on the entire surface.

When topcoating with solvent-based products, allow an overnight cure.

TERRAZZO SEALER: Thoroughly strip off all floor finish/wax down to bare Terrazzo surface using a floor stripper and black pad attached to a low speed floor machine. Once floor has been thoroughly stripped of floor finish, scrub the entire floor surface to be sealed with a neutral detergent or similar and follow with a clean water rinse continuing until all soap suds are completely removed. Allow to dry over night or use blower fans to force dry the surface.

Using a microfiber mop, apply a thin coat of EZ 22-PAS at a rate of 600-1,000 sq.ft. per gallon and allow to dry for 2 hours then repeat. If a higher gloss is desired, burnish the treated area with high speed buffer in conjunction with a white pad after the second application has cured for no less than 12 hours.

COVERAGE: *See chart on page 1 of this document.

SLIP RESISTANCE: Use an angular slip-resistant aggregate in all 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.

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CLEAN-UP: Clean up with water while wet. Freshly cured EZ 22-PAS may be removed using solvent such as Acetone, Toluene or Xylene.

MAINTENANCE: ***The coating system must be allowed to cure for no less than one week before using any mechanical cleaning equipment on the surface and no less than 3 days before neutral cleaner. This includes auto-scrubbers, swing buffers, sweepers, etc. Only dust and wet mopping may occur the first week.***

Dust mopping, removal of debris and regular cleaning is crucial to maintaining the aesthetics of the coating and obtaining the maximum life span of the floor coating system. Cleaning cannot occur too often and inefficient cleaning will cause the floor to wear out prematurely and possibly stain or discolor depending on what comes in contact with the floor. Spills should be removed quickly. *Avoid the use of Polypropylene or abrasive bristle* (Tynex®) brushes as these brushes will cause the development of scratch patterns and lessen the sheen.

To maximum your investment with proper floor care and maintenance, remove all particles that may scratch and/or dull the floor coating using the least aggressive method necessary to clean the floor.

- Daily = Sweep and dust mop or water only mopping/auto-scrubbing; spot clean spills and oils
- Weekly or Monthly = Scrubbed once per week or month depending on the amount and type of soils present.

DETERGENT: Always use the least aggressive detergent necessary to remove the residue.

***Caution*:** Do not drag or drop heavy objects across any floor, including coatings as scratching, gouging or chipping may occur to the concrete or the coating itself. This includes the tip of the forks on a forklift, nails protruding from a pallets, etc.

Avoid spinning tires on a coated floor surface as the heat created from the friction of a spinning tire will quickly soften the coating causing permanent damage.

Should a gouge, chip or scratch occur, touch-up the damaged areas immediately to avoid chemical or water intrusion to the concrete which could create additional damage. A thin layer of clear nail polish to the damaged area will provide some minimal protection until the area can be properly repaired.

Rubber tires are prone to plasticizer migration, especially aviation tires and high performance car tires. Plasticizer will stain coating and commercial flooring leaving an amber, yellow-like stain that can be permanent. This can be more noticeable where aircraft or vehicles are stationary for longer period of time, more so in non-climate controlled environments such as aircraft hangar with lighter colored floors. Some tire stains can be removed is cleaned before a set-in stain occurs using a d-Limonene based degreaser and some mild agitation using an orbital, low speed floor machine.

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