

PG-824

A HIGH PERFORMANCE, ALIPHATIC, FLEXIBLE, POLYURETHANE COATING APPLIED TO A VARIETY OF INTERIOR/EXTERIOR SURFACES

PG-824 is a premium two-component, low VOC, high performance water reducible, non-yellowing aliphatic polyurethane coating. PG-824 is a high gloss UV, abrasion and chemical resistant, flexible urethane coating that can be used for interior and exterior applications.

- High Gloss: Clear and Colors
- Low VOC
- Upon mixing A&B, the product is isocyanates free.
- Registered by NSF International (Reg # 132618, R2) as suitable for use at USDA facilities, on structural surfaces with the possibility of incidental food contact.
- Direct to many surfaces including metal, concrete, wood, ceramic tile, VCT tile, aluminum and galvanized metal without the need of a primer.

Recommended Uses for Interior & Exterior

- Food and beverage industry walls, floors and equipment.
- Pharmaceutical industry walls, floors, clean rooms and equipment.
- Amusement parks.
- Anti-graffiti system.
- Refineries.
- Power Industry.
- Storage tank exteriors.
- Roofs.
- Wastewater facility.
- Commercial buildings.
- Pipelines.

PRODUCT CHARACTERISTICS

Finish.....Gloss @ 60°angle up to 95
Color.....Clear and Colors
Weight Solids
Clear.....46% ± 3%
Colors.....53% - 59%
depending on color
Volume Solids
Clear.....48% ± 3%
Colors.....58% - 65%
depending on color
VOC
Clear.....11g/L
Colors.....15g/L to 25g/L
depending on color
Free Isocyanates (HDI) CMS
<0.036%
Recommended Spreading Rate/Coat
Vertical Surfaces.....Wet mils 4.0 to 5.0
Dry mils 2.4 to 3.0
Horizontal Surfaces..Wet mils 6.0 to 8.0
Dry mils 3.6 to 4.8
Actual Spread.....350 to 400 sq.
Application Viscosity
65 to 75 KU catalyzed & reduced
Drying Scheduled at 75 °F
To Touch.....4 hours
To Handle.....6 hours
To Walk On.....6 to 8 hours
Full Cure.....2 days
Pot Life at 75 °F.....1.5 hours
Sweat-in-Time.....2 minutes
Shelf Life.....Part A: 12 months
Part B: 12 months
Flashpoint.....>185 F
To Recoat With Itself If Necessary
at 75 °F.....6 to 8 hours
After 2 days sanding is required to
achieve adequate profile.

PERFORMANCE CHARACTERISTICS

System Tested.....Substrate: Steel
Surface Preparation
Wash with water-based biodegradable
neutral cleaner
Application.....Direct to surface.
Tensile Adhesion (ASTM D4541)
2473 to 2609 psi
Abrasion Resistance (ASTM D4060)
10-20 mg loss
Condensing Humidity (1000 Hours)
ASTM D2247.....Rusting: none
Blistering: none
Impact Resistance (ASTM D2794)
20 in-lbs.
Flexibility (Conical Bend) ASTM D522
% Elongation: 32%
Resistance to Cracking: < 1/8" diameter
Pencil Hardness (ASTM D3363)
Gouge Hardness: 4H
Scratch Hardness: H
Thermal Shock (ASTM D2246)
16 Cycles.....Passed
Salt Fog (ASTM B117) 5000 Hours
Passed
Water Vapor Transmission
Testing E96.....2.43 perms
QUV (ASTM D4587) 5000 Hours
Color Change: passed SSPC Paint
36 Standard of less than
2.0 delta E change.
Gloss Change: passes SSPC Paint 36
Standard of less than 30
gloss change.
Flame Retardant (ASTM 84)
15 - Class 1
Smoke Developed (ASTM 98)
5 - Class 1



60 REAR NEWHALL STREET.....LOWELL, MA 01852 USA

PHONE: 800-442-5535.....WWW.POLYGREENSYSTEMS.COM.....FAX: 978-453-2416

PolyGreen Systems is a Division of Umaco, Inc.

RECOMMENDED SYSTEMS

Vertical Structure

Apply PG-824 @ 4.0 to 5.0 mils WFT- Depending on porosity or profile of structure a second coat may be required.

Anti-Graffiti System

Apply one coat of pigmented PG-824 followed by one coat of PG-824 Clear. Alt. System - two coats of Clear.

SURFACE PREPARATION

Steel

Remove all loose rust, dirt, grease or other contaminants per SSPC-SP1, SSPC-SP2, SSPC-SP3 (e.g. low or high pressure water cleaner).

Aluminum

Remove all oil, grease or soap film with a PG-Surface Cleaner.

Galvanized Metals

Remove all oil, grease or soap film with PG-Surface Cleaner.

Concrete, Masonry & Concrete Block

Clean masonry substrates with PG-Surface Cleaner to remove any laitance using low or high pressure washer, grinding or shot blasting. For high build systems, use PG-100E Primer for first coat (Note: Due to the vast differences in concrete substrates consult a PolyGreen System representative for the proper coating system specifications).

Wood

Sand new wood to remove any surface contaminant and to lower grain. Previously finished wood should be sanded to provide good adhesion. Test patches are recommended.

Previously Painted Surfaces

Properly clean the surface of all dust, dirt, grease and foreign matter. Apply a test patch to ensure adhesion to the previous coating and also to ensure there will not be any delamination of the previous coating from the substrate.

Note: In order to ensure optimum performance, remove the previous coating to bare substrate by use of grinding or shot blasting.

Anti-Graffiti System

Follow appropriate surface preparation noted above. Use two coats of PG-824.

APPLICATION

Application Conditions

Temperature of the air, substrate and material is recommended to be between 50 °F and 95 °F and at least 5° above the dew point and relative humidity not above 80%.

Roller

For vertical surfaces use a 1/4" woven nap, Phenolic core and for horizontal surfaces use a 3/8" woven nap, Phenolic core roller.

Mixing Instructions

Stir each component thoroughly then mix the premeasured Part A with the Part B. Mix thoroughly, ensuring Parts A & B are blended together. Then allow the combined Parts A & B to "sweat in" for 2 minutes. You must reduce the mixed Part A & B components with clean tap water, at a recommended level of 5% to 20%. Reducer water should be added while agitating the product. The volume of Part A will vary. In some cases total volume after combining Part A & B, plus water reduction volume may exceed a gallon. Recommend separate containers larger than one gallon for mixing. Once the clean tap water is mixed into the combined Parts A & B you may start to apply the coating. No further sweat in time is required.

Pot Life: 1.5 hours at 75 °F, 50% R.H.

Reducer: Clean tap water

Clean Up: MEK, Xylene

When using 5 gallon pails after catalyzing and appropriate thinning the product must be distributed into 3 separate rolling tubs to maintain the 1.5 hour pot life. Keeping the product in the 5 gallon pail reduces the pot life to 20 minutes.

PRODUCT MUST BE THINNED FOR PROPER CURING AND FILM BUILD.

For smooth vertical surfaces, thin 15% with clean tap water. For rough vertical

surfaces, thin 10% to 15% with clean tap water. For horizontal surfaces, thin 20% to 25% with clean tap water.

CAUTION

Follow the MSDS for personal protective equipment to use when handling the product. Use only as directed.

KEEP OUT OF REACH OF CHILDREN.

For technical assistance call 800-442-5535

www.polygreensystems.com

LIMITED WARRANTY

The manufacturer guarantees its products to be free of defects and the extent of its liability is limited to the purchase price of the materials only, if proved to be defective. Improper mixing, incorrect application or other factors beyond the control of the manufacturer or its dealers may produce unsatisfactory results and cannot be held to be the manufacturers or its dealers responsibility. There are no other guarantees either expressed or implied.

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FEATURES & BENEFITS

PG-824 URETHANE

- **MEETS U.S. BUILDING COUNCIL'S LEED CRITERIA FOR LOW EMITTING PAINTS & COATINGS**
- **MEETS CALIFORNIA GREEN BUILDING STANDARDS CODE OF REGULATION TITLE 24, PART**
- **EXCEPTIONAL BONDING CAPABILITY**
No primers needed as it adheres to most previously painted surfaces, ferrous and non-ferrous metals without destructive surface preparation. Types of surfaces include concrete, (attained concrete), carbon steel, aluminum, galvanized metal, stainless steel, fiberglass, wood, clay/masonry surfaces, stone floors, hardwood floors, terrazzo surfaces, ceramic floor, VCT, and wall surfaces with the addition of adhesion plus.
- **PERMEABILITY OF 2.43 PERMS**
Water barrier not vapor barrier. Allow water vapors to migrate through the coating into the atmosphere providing the substrate is not susceptible to water pooling.
- **ULTRAVIOLET INSENSITIVITY**
No clear coat needed for better UV protection.
- **LESS THAN 30 GRAMS/L VOC**
- **BRUSH, ROLL OR SPRAY**
- **ODORLESS**
Does not require special breathing apparatus and is isocyanates free after parts A & B are mixed.
- **PRODUCED IN TOTAL WATER**
- **THERMAL STABILITY**
High coefficient of linear expansion.
- **NO PROPOSITION 65 CHEMICALS**
- **FOR INDOOR USE WHILE BUILDING IS IN OPERATION**
- **UV STABLE MAKING IT AN IDEAL EXTERIOR COATING**
- **REGISTERED BY NSF INTERNATIONAL (REG.# 132618, R2)**
Suitable for the use of incidental food contact.
- **FLAME RETARDANT (ASTM); 15-CLASS 1**
- **SMOKE DEVELOPED (ASTM 98); 5-CLASS 1**
- **CAN BE USED ON VERTICAL OR HORIZONTAL SURFACES**
- **PROVIDES ANTI-GRAFFITI SYSTEM**
- **REPAIRABLE**



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PG-824 URETHANE INDEPENDENT CHEMICAL RESISTANCE TESTING (SPOTS) BY ASTM TEST D1308

TEST DESCRIPTION	TEST RESULTS
WATER	PASSED
WATER WITH DETERGENT	PASSED
10% HYDROCHLORIC ACID	PASSED
36% HYDROCHLORIC ACID	FAILED (Extreme test/severe chemical/not an issue)
TOLUENE	PASSED
GASOLINE	PASSED
MEK	PASSED
10% SULFURIC ACID	PASSED
ACETONE	PASSED
ISOPROPYL ALCHOL	PASSED
XYLOL	PASSED
50% SODIUM HYDROXIDE	PASSED
20% SODIUM CHLORIDE	PASSED
37% SULFURIC ACID (BATTERY)	PASSED
BRAKE FLUID	FAILED (Extreme test/severe chemical/not an issue)
HYDRAULIC FLUID	PASSED
SKYDROL JP-4	PASSED
BLEACH	PASSED
BETADYNE	PASSED
KETCHUP	PASSED
MUSTARD	PASSED
ORANGE JUICE	PASSED

Note: PG-824 Urethane was tested for Chemical Resistance using 20 strong chemicals/mixtures placed under a “watch glass” cover for 24 hours. This is extreme and far more severe than typical customer field conditions. Because of this we are not



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