



## Technical Data Sheet for *Polyurea Aliphatic 807*

### PRODUCT DESCRIPTION

**PAL-807** is a new revolutionary non-conventional exterior 100% polyurea coating. This product has been designed specifically to deliver the toughness and abrasion resistant properties of that of an aromatic polyurea but provides the capability of retaining color-fastness for a full range of pigmented colors. Unlike conventional aromatic polyurea, which in a white pigmented system turns yellow in hours when left in direct sun light, **PAL-807** systems can withstand direct harsh sunlight experiencing no color change after 1 year. **PAL-807** is available with different hardness and reactivities. **PAL-807** is available in 2 versions – horizontal and vertical. Horizontal **PAL-807** has a gel time of approximately 60 seconds allowing the ability to broadcast into it if desired, whereas Vertical **PAL-807** is a quick set material allowing to be sprayed vertically without running. **PAL-807** complies with FDA 21CFR 175.105 and 21 CFR 175.300. **PAL-807** is also available with fire retardant additives. These additives allow APA to meet ASTM E84 Class A. **PAL-807** uses a mix ratio of 1A - 1B. APA may be applied using high pressure heated plural equipment, low pressure heated equipment or using cold spray 2K cartridge equipment. Recommended heater settings are 130°F for both primary heaters and hose heater. Machine pressure should be set at around 2000 psi.

### APA PHYSICAL PROPERTIES

Hardness	ASTM D785	90-95 A
Tensile Strength	ASTM D412	3600 psi
Elongation	ASTM D412	350%
Taber Abrasion CS17	ASTM D4060	45 mg/1k cycle
Mix Ratio	PBV	1A – 1B

### ADHESION RESULTS

Typical Substrates per ASTM D-4541 Elcometer		
Concrete*	>300 psi	Cohesive failure; excellent bonding
Steel*	>1000 psi	Excellent bonding
Composite Lamination*	>1000 psi	Saturated; excellent bonding
*All substrates primed with SuperSkinSystems' Primer 28		

Read the Safety Data Sheet (SDS) and container labels for detailed health and safety information. This product is intended for industrial use by properly trained professional applicators only.

### TECHNICAL APPLICATION

**PAL-807** does not contain VOC's. Application temperature ranges from 40°F - 125°F. **PAL-807** may be applied using a 2-component, high pressure spray machine or cartridge gun application. Substrate surfaces must be clean, dry and free of contaminants and dust. Substrates must be free of loose rust, paint, moisture, dirt oils, etc. If application surface exhibits extensive corrosion, spalling and/or weak deteriorating substrate, normal forms of media or shot blasting is recommended to create a secure surface preparation. For conditions which may only require liquid washing and cleaning with detergents, acids, bio-enzymes, etc. or conditions involving processes of scrubbing, rinsing and drying, the finish surface must not retain any residual cleaner unless specified by PolyGreen Solutions, LLC.. Concrete must be fully cured and should be prepared with shot blasting, diamond grinding or machine sanding depending on the severity of the concrete surface condition. Similar proper preparation must be performed for metal surfaces. Primers are recommended for proper preparation. Always power clean using mild detergent prior to sanding, etc. Spray coverage at 16 mils is 100 sq. ft./ mixed gallon.

### WARRANTY

THE INFORMATION HEREIN IS BELIEVED TO BE RELIABLE, BUT UNKNOWN RISKS MAY BE PRESENT. PolyGreen Solutions, LLC., WARRANTS ONLY THAT THE MATERIALS SHALL BE OF MERCHANTABLE QUALITY. THIS WARRANTY IS IN LIEU OF ALL OTHER WRITTEN OR UNWRITTEN, EXPRESSED OR IMPLIED WARRANTIES. SUPERSKINSYSTEMS, INC., EXPRESSLY DISCLAIMS ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, OR FREEDOM FROM PATENT INFRINGEMENT. ACCORDINGLY, BUYER ASSUMES ALL RISKS WHATSOEVER AS TO THE USE OF THESE MATERIALS. BUYER'S EXCLUSIVE REMEDY AS TO ANY BREACH OF WARRANTY OR NEGLIGENCE CLAIM SHALL BE LIMITED TO THE PURCHASE PRICE OF THE MATERIALS. FAILURE TO STRICTLY ADHERE TO RECOMMENDED PROCEDURES.



## CHEMICAL RESISTANCE CHART

### 21 Day Immersion Test ASTM D3912

Chemical Name	Results @ 25°C
Acetic Acid	R
Acetone	R
Ammonium Hydroxide (14%)	R
Brake Fluid	R
Brine-Saturated Water (310g/l)	R
Clorox (10%) Water	R
Diesel Fuel	R
Gasoline	R
Gasoline 5% MTBE	R
Gasoline 5% Methanol	R
Hydrochloric Acid (25%)	R
Hydrochloric Acid (10%)	R
Hydraulic Fluid	R
Isopropyl Alcohol	R
Lactic Acid	R
MEK	R
Methanol	R
Methylene Chloride	C
Mineral Spirits	R
Motor Oil	R
MTBE	C
Muriatic Acid (10%)	R
NaCl Water (10%)	R
Nitric Acid (20%)	RC
Phosphoric Acid (10%)	R
Phosphoric Acid (50%)	R
Potassium Hydroxide (10%)	R
Potassium Hydroxide (20%)	R. Dis
Skydrol	R
Sodium Hydroxide (25%)	R. Dis
Sodium Hypochlorite (10%)	R
Sodium Bicarbonate	R
Stearic Acid	R
Sugar Water	R
Sulfuric Acid (10%)	RC
Sulfuric Acid (30%)	NR
Toluene	R
Trisodium Phosphate	R
Vinegar Water (5%)	R
Water/ Water (14 days @ 82°C)	R/ R
Xylene	R

### 72 Hour Spot Test Chemical Resistance Data

#### ChemSkin Silicone Polyurea (CSP)

Chemical	Rating
NH <sub>3</sub> 50%	8
HCL 37.5%	9
NaOH 50%	8
H <sub>2</sub> SO <sub>4</sub> 50%	8
HI 57%	8
H <sub>3</sub> PO <sub>4</sub> 50%	8
Brake Fluid	10
Anti-Freeze	10
Motor Oil	10

#### Rating Guidelines

0-1	75-100% Film Dissolved
1-2	50-75% Film Dissolved
2-3	25-50% Film Dissolved
3-4	1-25% Film Dissolved
4-5	Film damage severe, cracking, pinholes
5-6	Film moderate to heavy damage, swollen, dulled
6-7	Film moderately damaged, haze, residue
7-8	Film with slight or no damage, slight haze, residue
8-9	Film in very good condition
10	Film unchanged, excellent condition

#### \*NOTES:

- All samples using 57% HI had purple iodine discoloration due to the nature of the acid in the air
- Samples were placed at room temperature for 72 hours after application of 1 ml of solvent on 16 mil film of product

#### CHART KEY

- R – Recommended (little or no visible damage)
- RC – Recommended Condition (swelling or discoloration)
- C- Conditional (crackling – wash down within 1 hour)
- NR – Not Recommended
- Dis. – Discoloration

