



HardSkin Polyurea

Two-Component 100% Solids Polyurea



TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

HardSkin Polyurea is an extremely tough and hard, 100% solids, super-polymer formulation which stands up to high heat, provides excellent chemical resistance and contains flame retardants. HardSkin Polyurea is a slight caramel colored, translucent coating which can be color tinted to produce translucent or opaque colors. This aromatic super-polymer is not UV stable and must be top-coated with an aliphatic UV stable coating such as our ClearSkin, APA, Fireskin 1K or Acrylic TopCoat for outdoor application. HardSkin also provides excellent bonding performance, low surface friction, toughness and abrasion resistance.

HardSkin Polyurea PHYSICAL PROPERTIES

Hardness	ASTM D785	80D
Tensile Strength	ASTM D412	5111 psi
Elongation	ASTM D412	250%
Water Absorption (24 hr.)	ASTM D570	0.25%
Moisture Vapor Transmission	ASTM E96	0.24 perms
Taber Abrasion CS17	ASTM D4060	50 mg/1k cycle
Tear Strength	ASTM D624	690 lbs./lin. in.
Gel Time	Time	5-15 sec.
Mix Ratio	PBV	1A – 1B

ADHESION RESULTS

Typical Substrates per ASTM D-4541 Elcometer		
Concrete – No Primer	>300 psi	Cohesive failure; excellent bonding
Steel – No Primer	>1000 psi	Excellent bonding
Composite Lamination	>1000 psi	Saturated; excellent bonding

HEALTH AND SAFETY

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 DATA

HardSkin Polyurea does not contain VOC's. Application temperature ranges from 40°F - 100°F. Functional operation temperature ranges from -40° to 250°F. HardSkin Polyurea may be applied by a standard 2-component, high pressure spray machine. 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 Superskinsystems, Inc. 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 also required for proper preparation. Always power clean using mild detergent prior to sanding, etc. Spray coverage at 16 mils is 100 sq. ft./ mixed gallon.

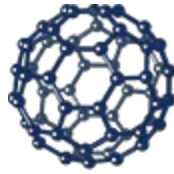
WARRANTY

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SUPERSKINSYSTEMS

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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	R
Water (14 days @ 82°C)	R
Xylene	RC

72 Hour Spot Test Chemical Resistance Data	
ChemSkin Silicone Polyurea (CSP)	
Chemical	Rating
NHO ₃ 50%	8
HCL 37.5%	9
NaOH 50%	8
H ₂ SO ₄ 50%	8
HI 57%	8
H ₃ PO ₄ 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



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