



ChemSkin Silicone Polyurea (CSP)

Two-Component 100% Solids Polyurea

TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

Chemskin Silicone Polyurea (CSP) is a **patented*** 100% solid polyurea with a silicone tail. This enables the polyurea to have superior chemical and heat resistance, lower water absorption, better abrasion resistance and improved weathering. Although aromatic, the silicone tail reduces oxidation when exposed to direct sunlight. Light colors will still change but gloss remains. CSP will have less algae build up and reduce marine growth compared to regular polyurea. CSP performs well when exposed to petroleum products such as gasoline with or without ethanol, diesel fuel with or without biofuel added, and crude. It can also be formulated with special fillers to reduce radiation for encapsulation. **CSP meets NSF-61 for potable water application.** CSP is also available with flame retardants. CSP requires heated plural spray equipment such as Graco EXP-2 using heated hose of 160°F and primary heats of the same temperature. Spray pressures using Graco P2 or Fusion gun are to be set at 2000 psi. Surface preparation should be the same as regular polyurea that is clean, dry and abraded. CSP can be available in different hardness from 65 Shore D to 80 Shore A. Tensile strength and elongation will vary with hardness.

ChemSkin Silicone Polyurea (CSP) PHYSICAL PROPERTIES

		REGULAR	FLEX	SUPER-FLEX
Hardness	ASTM D785	60-75 D	80-75 A	70-75 A
Tensile Strength	ASTM D412	3750 psi	2500 psi	2200 psi
Elongation	ASTM D412	350%	450%	500%
Water Absorption (24 hr.)	ASTM D570	0.25%	0.25%	0.25%
Moisture Vapor Transmission	ASTM E96	0.24 perms	0.24 perms	0.24 perms
Taber Abrasion CS17	ASTM D4060	<30 mg/1k cycle	<30 mg/1k cycle	<30 mg/1k cycle
Tear Strength	ASTM D624	690 lbs./lin. in.	500 lbs./lin. in.	300 lbs./lin. in.
Gel Time	Time	5-15 sec.	5-15 sec.	5-15 sec.
Mix Ratio	PBV	1A – 1B	1A – 1B	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		

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.

PRODUCT APPLICATION

ChemSkin Polyurea (CSP) does not contain VOC's. Application temperature ranges from 40°F - 100°F. Functional operation temperature ranges from -40° to 250°F. CSP 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 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

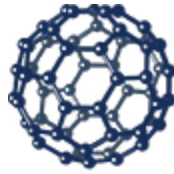
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***U.S. Patent # 9,714,363.**



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ChemSkin Silicone Polyurea (CSP)

Two-Component 100% Solids Polyurea

CHEMICAL RESISTANCE CHART

21 Day Immersion Test ASTM D3912

Chemical Name	Results @ 25°C	72 Hour Spot Test Chemical Resistance Data	
		ChemSkin Silicone Polyurea (CSP)	
		Chemical	Rating
Acetic Acid	R	NHO ₃ 50%	6
Acetone	R	HCL 37.5%	6
Ammonium Hydroxide (14%)	R	NaOH 50%	8
Brake Fluid	R	H ₂ SO ₄ 50%	8
Brine-Saturated Water (310g/l)	R	HI 57%	8
Clorox (10%) Water	R	H ₃ PO ₄ 50%	8
Diesel Fuel	R	Brake Fluid	10
Gasoline	R	Anti-Freeze	10
Gasoline 5% MTBE	R	Motor Oil	10
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		

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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