



Product Data Sheet:

GacoFlex™ U91
Revised: 10/2020

GACOFLEX™ U91
SINGLE-COMPONENT MOISTURE CURE POLYURETHANE

A. DESCRIPTION:

GacoFlex U91 is a single-component moisture cure polyurethane.

B. RECOMMENDED USE:

GacoFlex U91 is intended for use as a liquid-applied waterproofing coating for plywood and concrete decking as part of pedestrian and vehicular decking systems. It may also be used in roofing and shower pan liner applications.

C. PRODUCT CHARACTERISTICS:

PROPERTY	DESCRIPTION
Adhesion	Exceptional adhesion to GacoFlex E5691 and E5320.
Color	U9101 - OYSTER
	U9102 - PEWTER
	U9116 - SHALE
	U9118 - ADOBE
	U9149 - DESERT
Consistency	GacoFlex U91 is thixotropic in nature and has a viscosity of approximately 8000 centipoises.
Coverage	1 Gallon/100 ft ² per coat to yield a final dry film thickness of 12.8 mils.
Solids	80% by volume
Storage Stability	6 months at 50 to 80 °F (10 to 27 °C) is the confirmed shelf life but testing is ongoing.
Toxicity	Contains a toluene diisocyanate prepolymer.
V.O.C.	150 g/l
Weatherability	Outstanding weatherability and chalking resistance.

**For specific Health and Safety information please refer to applicable Safety Data Sheet*

D. PERFORMANCE STANDARD

PROPERTY	ASTM TEST	STANDARD (MIN)
External Fire Exposure – Flame Spread	E108	Class A Unlimited Slope
Flash Point	D56 (Closed Cup)	100 °F (37 °C)
Hardness	D2240	90 ± 5 Shore A
Hardness @ 70 °F (27 °C)	C836	77 Shore A
Tear Resistance	D624	360 pli
Tensile	D412	
	Elongation:	350%
	Permanent Set at Break:	7% max
	Strength:	2600 psi

Water Vaper Permeability	E-96 Procedure B Max. 100% RH difference @ 23 °C	0.02 perm inches
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PERFORMANCE STANDARD (cont.)			
PROPERTY	TEST	STANDARD (MIN)	U91
ANSI/FM Approvals 4474, Appendix B Simulated Wind Uplift Pull Test	FM 4474	1,005 psf	Pass
Florida Building Code test protocol for the High Velocity Hurricane Zone (HVHZ), Testing Application Standard TAS 114-95, Appendix D: Test Procedures for simulated Uplift Pressure Resistance of Adhered Roof System Assemblies	TAS 114	1,005 psf	Pass

E. PROCESS STANDARD:

	STEP	DESCRIPTION
1.	Thinning	Thinning is typically required depending on application. Use GacoFlex T5112 or GacoFlex T5120 but do not exceed 10% by volume.
2.	Mixing	Use an electric or compressed-air-powered mixer that will thoroughly agitate the mix. A Jiffy-type mixer has been found to work well with the initial mixing of this coating.
3.	Pot Life	After two hours at 70 to 80 °F (21 to 27 °C) and 50% RH there will be some skinning and an increase in viscosity. Pot life can be extended to three hours by thinning up to 10% with T5112.
4.	Application	Refer to specification from Gaco Sales Representative or individual job specification. Sample application specification would be to prepare concrete according to Gaco General Instructions GW-1-1 "Surface Preparation" and apply GacoFlex E5691 Primer Sealer. Polyurethane coating application rates will vary depending on application. Do not exceed an application rate of 1.25 gallons per 100 ft ² (20 mils WFT) per coat of GacoFlex U91. Allow sufficient time between each coat for coating system to fully cure.
5.	Dry Time	24 hours at 75 °F (24 °C) and 50% RH. Dry time will be faster in warmer and more humid conditions, and slower in colder and dryer conditions.
6.	Clean Up	Clean up application tools and equipment with GacoFlex T5112 or GacoFlex T5120.

APPLICATION-SPECIFIC PERFORMANCE STANDARD + CHARACTERISTICS**A. PEDESTRIAN AND VEHICLE DECKING**

Exceeds requirements of ASTM C957 Standard Specification for High-Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane with Integral Wearing Surface. As required by the International Building Code 2012, section 1507.17 and the International Residential Code 2012, Section R905.15.

PROPERTY	ASTM TEST	REQUIRED	U91
Abrasion Resistance	C501	<50mg	35mg
Adhesion in Peel (after water emersion)			
<i>Cement</i>	C794 / C957	>5 lbf	19 lbf
<i>Plywood</i>	C794 / C957	>5 lbf	22 lbf
Chemical Resistance (Min, % tensile variation)			
<i>Ethylene Glycol</i>	D471 / D412	>70%	99%

<i>Mineral Spirits</i>	D471 / D412	> 45%	98%
<i>Water</i>	D471 / D412	>70%	99%

PEDESTRIAN AND VEHICLE DECKING (cont.)			
PROPERTY	ASTM TEST	REQUIRED	U91
Low Temp Crack Bridging	C1305 / C957	No Cracking	Pass
Stability in Can	C957	6 months	Pass
Weathering Resistance and Recovery from Elongation 500 hr. xenon arc and 7 days at 158 °F (70 °C)			
<i>Elongation Retention</i>	G1442 / G155	>90%	99%
<i>Recovery from Elongation - Initial</i>	G1442 / G155	>90%	99%
<i>Tensile Retention</i>	G1442 / G155	>80%	123%
Weight Loss of Base Coat	C1250	<40%	4%

B. SHOWER PAN LINER – TILE APPLICATIONS

GacoFlex U91 exceeds requirements ANSI 118.10 – Standard Specification of Load Bearing Bonded Waterproofing Membranes for Thin Set Ceramic Tile and Dimensional Stone Installation. Meets the requirement of the International Plumbing Code 2012, section 417.5.2.6 and the International Residential Code 2012, Section P2709.12.

PROPERTY	ASTM TEST	REQUIRED	U91	
Breaking Strength	D751 – Procedure B	170 psi	440 psi	
Dimensional Stability	D1204	0.7%	0.27% @ 150°F	
	D1204	0.7%	0.03 @ -15°F	
Seam Strength	D751	8 lb/in	20.3 lb/in	
Shear Strength				
<i>Dry</i>	<i>7 Days</i>	D482	50 psi	55 psi
	<i>4 Weeks</i>	D482	50 psi	88 psi
	<i>28 Weeks</i>	D482	50 psi	120 psi
<i>Water Immersion</i>	<i>7 Days</i>	D482	50 psi	57 psi
	<i>100 Days</i>	D482	50 psi	59 psi
Waterproofness	D4068	No Leak	Pass	