



**Material Properties
of Water Resistant Sorbothane®**

EFFECTIVE 1/27/15

PROPERTY	DUROMETER (Shore 00)			UNITS	NOTES
	30	50	70		
Tensile Strength at Break	103	131	170	psi	ASTM D 412-06a
Elongation at Break	342	219	154	%	ASTM D 412-06a
Tensile Strength at 100% Strain	25	56	116	psi	ASTM D 412-06a
Tensile Strength at 200% Strain	61	114	-	psi	ASTM D 412-06a
Tensile Strength at 300% Strain	92	-	-	psi	ASTM D 412-06a
Compressive Stress at 10% Strain	2.1	4.7	10.3	psi	ASTM D 575-91, Method A
Compressive Stress at 20% Strain	5.1	10.7	23.7	psi	ASTM D 575-91, Method A
Compression Set	10	2	3	%	ASTM D 395
Tear Strength	13	14	18	lb/in	ASTM D 624-00, Die C
Bulk Modulus	4.25	3.99	4.14	gPascal	
Poisson's Ratio	0.4825	0.5064	0.5427		
Density	79.78	79.78	79.60	lb/ft ³	ASTME D 792-13
Specific Gravity	1.278	1.278	1.275		ASTME D 792-13
Optimum Performance Temperature Range	-20° to +140°	-20° to +150°	-20° to +160°	°F	Reduced strength and damping up to 200°F. Increased spring rate down to glass transition temperature.
Glass Transition	-29	-26	-25	°C	ASTM E 1640-09 by Peak Tan Delta
Resilience Test Rebound Height	7	14	20	%	ASTM D 2632-92
Resilience Test Rebound Height	11	14	23	%	ASTM D 2632-92. Modified for the effects of material tackiness.
Dielectric Strength	305	308	317	V/ml	ASTM D 149-13, Method A
Dyanmic Young's Modulus at 5 Hertz	47, 52, 61	94, 105, 121	137, 157, 187	psi	Dyanmic Young's Modulus at 5 Hertz at 10%, 15%, 20%
Dyanmic Young's Modulus at 15 Hertz	69, 77, 88	127, 142, 163	173, 196, 230	psi	Dyanmic Young's Modulus at 15 Hertz at 10%, 15%, 20%
Dyanmic Young's Modulus at 30 Hertz	88, 98, 112	156, 174, 199	204, 230, 270	psi	Dyanmic Young's Modulus at 30 Hertz at 10%, 15%, 20%
Dyanmic Young's Modulus at 50 Hertz	106, 118, 135	182, 203, 232	232, 270, 305	psi	Dyanmic Young's Modulus at 50 Hertz at 10%, 15%, 20%
Tangent Delta at 5 Hz Excitation	0.55	0.41	0.28		
Tangent Delta at 15 Hz Excitation	0.62	0.48	0.36		
Tangent Delta at 30 Hz Excitation	0.65	0.51	0.41		
Tangent Delta at 50 Hz Excitation	0.66	0.52	0.44		
Bacterial Resistance	No Growth	No Growth	No Growth		ASTM G 21-09
Fungal Resistance	No Growth	No Growth	No Growth		ASTM G 22
Heat Aging	Stable	Stable	Stable		72 hours @ 158°F shows no change
Ultraviolet	Good	Good	Good		
Ozone					Can be compounded for resistance
Chemical Resistance to Distilled Water	2.1	1.6	1.4		ASTM D 543, 7-day immersion
Chemical Resistance to City Water	2.0	1.5	1.2		ASTM D 543, 7-day immersion
Chemical Resistance to Hydraulic Fluid	-3.0	-2.5	-2.6		ASTM D 543, 7-day immersion
Chemical Resistance to Kerosene	6.4	5.8	6.0		ASTM D 543, 7-day immersion
Chemical Resistance to Diesel	3.0	4.0	0.5		ASTM D 543, 7-day immersion
Chemical Resistance to 50% Ethanol	16.2	15.0	12.6		ASTM D 543, 7-day immersion
Chemical Resistance to Soap Solution	16.3	6.2	3.6		ASTM D 543, 7-day immersion
Chemical Resistance to Gasoline	28.6	29.3	32.9		ASTM D 543, 7-day immersion

continued on next page

**Material Properties
of Water Resistant Sorbothane®**

EFFECTIVE 1/27/15

PROPERTY	DUROMETER (Shore 00)			UNITS	NOTES
	30	50	70		
Chemical Resistance to Turpentine	33.5	31.5	29.2	% wt change	ASTM D 543, 7-day immersion
Chemical Resistance to Motor Oil 15W40	-3.3	-2.9	-2.4	% wt change	ASTM D 543, 7-day immersion
Chemical Resistance to Hexane	-1.6	-3.0	-3.2	% wt change	ASTM D 543, 7-day immersion
Chemical Resistance to IRM 903	-0.9	-0.8	-0.6	% wt change	ASTM D 543, 7-day immersion
Chemical Resistance to 1N Acetic Acid	N/A (Specimens decomposed)			% wt change	ASTM D 543, 7-day immersion
Chemical Resistance to Ethylene Glycol	0.4	0.3	0.6	% wt change	ASTM D 543, 7-day immersion
Chemical Resistance to 1N NaOH	0.8	0.9	0.9	% wt change	ASTM D 543, 7-day immersion