

Product Specifications

Property	Units	ASTM Test Method	NYCAST® 6PA	NYCAST® 6PA MoS ₂	NYCAST® XHA	NYCAST® NYLOIL	NYCAST® NYLOIL MDX	NYCAST® RX/GX/BX	NYCAST® SLX	NYCAST® CP	NYCAST® 6 MPB/ 6 MPY	NYCAST® 12
Specific Gravity	g/cm ³	D 792	1.15 - 1.17	1.15 - 1.17	1.15 - 1.17	1.14 - 1.15	1.14 - 1.15	1.14 - 1.15	1.12 - 1.14	1.10 - 1.13	1.14 - 1.16	1.03
Tensile Strength	psi	D 638	10,000 - 13,500	10,000 - 13,500	10,000 - 13,500	9,500 - 11,000	10,500 - 11,000	10,000 - 11,000	10,000 - 11,000	9,000 - 11,000	9,000 - 11,000	7,000 - 8,500
Tensile Elongation	%	D 638	20 - 55	20 - 55	20 - 30	35 - 55	35 - 45	35 - 55	20 - 45	25 - 40	25 - 35	10 - 20
Tensile Modulus	psi	D 638	400,000 - 550,000	400,000 - 550,000	450,000 - 550,000	375,000 - 475,000	425,000 - 475,000	400,000 - 475,000	400,000 - 475,000	375,000 - 475,000	375,000 - 475,000	320,000 - 380,000
Compressive Strength	psi	D 695	13,500 - 16,000	14,000 - 16,500	13,500 - 16,000	13,500 - 15,000	13,500 - 14,000	13,500 - 15,000	14,000 - 16,500	12,000 - 14,000	12,500 - 15,000	10,000 - 12,000
Compressive Modulus	psi	D 695	325,000 - 400,000	345,000 - 425,000	325,000 - 400,000	325,000 - 375,000	325,000 - 375,000	325,000 - 375,000	345,000 - 425,000	275,000 - 375,000	300,000 - 375,000	250,000 - 300,000
Flexural Strength	psi	D 790	15,000 - 17,500	15,000 - 18,000	15,000 - 17,500	14,000 - 16,000	15,500 - 16,000	14,000 - 16,000	13,500 - 16,000	13,000 - 16,000	12,000 - 13,000	10,000 - 12,000
Flexural Modulus	psi	D 790	420,000 - 500,000	400,000 - 520,000	420,000 - 500,000	375,000 - 475,000	425,000 - 475,000	375,000 - 475,000	350,000 - 475,000	325,000 - 475,000	300,000 - 360,000	260,000 - 300,000
Shear Strength	psi	D 732	10,000 - 11,000	10,000 - 11,000	10,000 - 11,000	8,000 - 9,000	8,000 - 9,000	8,000 - 9,000	8,000 - 9,000	7,500 - 9,000	7,500 - 10,000	6,000 - 8,000
Notched Izod Impact	ft.lbs/in.	D 256	1.5 - 2.5	1.4 - 2.4	1.0 - 2.5	1.4 - 1.8	1.4 - 1.8	1.4 - 1.8	1.4 - 1.8	2.0 - 4.0	2.5 - 6.0	4.0 - 8.0
Hardness, Rockwell	R	D 785	110 - 115	110 - 120	110 - 120	100 - 115	100 - 115	100 - 115	100 - 115	100 - 110	95 - 110	100 - 110
Hardness, Shore	D	D 2240	78 - 84	78 - 86	78 - 86	74 - 80	74 - 80	74 - 80	74 - 80	74 - 80	70 - 80	75 - 80
Melting Point	°F	D 3418	430 +/- 10	430 +/- 10	430 +/- 10	430 +/- 10	430 +/- 10	430 +/- 10	430 +/- 10	400 +/- 10	430 +/- 10	350 +/- 10
Coefficient of Linear Thermal Expansion	in./in./°F	D 696	5.0 * 10 ⁻⁵	5.0 * 10 ⁻⁵	5.0 * 10 ⁻⁵	5.0 * 10 ⁻⁵	5.0 * 10 ⁻⁵	5.0 * 10 ⁻⁵	5.0 * 10 ⁻⁵	4.0 - 5.0 * 10 ⁻⁵	5.0 * 10 ⁻⁵	5.5 * 10 ⁻⁶
Deformation Under Load	%	D 621	0.5 - 2.5	0.5 - 2.6	0.5 - 2.6	0.7 - 3.0	0.7 - 0.8	0.7 - 3.0	0.7 - 3.0	1.0 - 3.0	1.0 - 3.0	-
Deflection Temperature												
264 psi	°F	D 648	200 - 300	200 - 300	200 - 400	200 - 300	200 - 300	200 - 300	200 - 300	200 - 300	200 - 300	120 - 145
66 psi	°F	D 648	300 - 400	300 - 400	300 - 450	300 - 400	300 - 400	300 - 400	300 - 400	300 - 400	300 - 400	240 - 260
Continuous Service Temperature	°F	-	230	230	250	230	230	230	230	210	230	230
Intermittent Service Temperature	°F	-	330	330	350	330	330	330	330	300	330	300
Coefficient of Friction, Dynamic		D 1894	0.26	0.22	0.26	0.12	0.12	0.16	0.14	0.26	0.26	0.26
Water Absorption												
24 hours	%	D 570	0.5 - 0.6	0.5 - 0.6	0.5 - 0.6	0.4 - 0.6	0.4 - 0.6	0.5 - 0.6	0.5 - 0.6	0.2 - 0.3	0.5 - 0.6	0.2 - 0.3
Saturation	%	D 570	4.0 - 6.0	4.0 - 6.0	4.0 - 6.0	4.0 - 5.0	4.0 - 5.0	4.0 - 6.0	4.0 - 6.0	3.0 - 5.0	4.0 - 6.0	1.2 - 1.6
Dielectric Strength	v/mil.	D 149	500 - 600	500 - 600	500 - 600	500 - 600	500 - 600	500 - 600	500 - 600	500 - 600	500 - 600	400 - 450
Dielectric Constant												
60 Hz		D 150	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.5
1000 Hz		D 150	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.5
1 MHz		D 150	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.5
Compliance												
FDA			X	-	-	-	-	-	-	-	-	-
USDA 3A			X	-	-	-	-	-	-	-	-	-
UL 94 HB			X	X	X	X	X	X	X	X	X	X

The facts stated and recommendations contained herein are based on experiments and information believed to be reliable. No guarantee is made of the accuracy, however, and the products are sold without warranty, expressed or implied, and upon the conditions that purchasers shall conduct tests to determine suitability for their intended use.