Nylatron ® Material Data Sheets

					Nylatron ® GS FILLED NYLON	Nylatron ® NS FILLED NYLON	Nylatron ® GSM NYLON	Nylatron ® GSM-BLUE NYLON	Nylatron ® NSM NYLON	MC 901 BLUE NYLON	MC 904 BLUE NYLON	MC 907 NATURAL NYLON
			Units	ASTM Test Method	MoS2 FILLED TYPE 6/6 POLYAMIDE	LUBRICATED TYPE 6/6 POLYAMIDE	MoS2 FILLED TYPE 6 POLYAMIDE	LUBRICATED TYPE 6 POLYAMIDE	LUBRICATED TYPE 6 POLYAMIDE	MONOCAST HEAT STABILIZED TYPE 6 POLYAMIDE	PLASTICIZED HEAT STABILIZED TYPE 6 POLYAMIDE	MONOCAST FDA TYPE 6 POLYAMIDE
MECHANICAL	1	Strength to Weight Ratio	ksi	-								
	2	Specific Gravity @73 F	-	D792	1.16	1.18	1.16	1.15	1.15	1.15	1.15	1.15
	3	Tensile Strength @73 F, (ult)/(yld)	psi	D638	12500 (ult)	10500(ult)	10500(ult)	10000(ult)	11000(ult)	11000(ult)	9500(ult)	12000(ult)
	4	Tensile Modulus of Elasticity @ 73 F	psi	D638	480000	410000	400000	500000	410000	400000	275000	400000
	5	Tensile Elongation at Break @ 73 F	%	D638	25	10	30	35	20	20	50	20
	6	Flexural Strength @ 73 F	psi	D790	17000	14000	16000	15000	16000	16000	-	16000
	7	Flexural Modulus of Elasticity @ 73 F	psi	D790	460000	400000	500000	500000	475000	500000	-	500000
	8	Shear Strength @ 73 F	psi	D732	10500	9000	10500	-	10000	11000	-	11000
	9	Compressive Strength, (% Deformation) @73 F	psi	D695	160000(10)	12000(10)	14000(10)	13000(10)	14000(10)	15000(10)	-	15000(10)
	10	Compressive Modulus of Elasticity @73 F	psi	D695	420000	400000	400000	425000	400000	400000	-	400000
	11	Hardness, Rockwell, Scale as noted @73 F	-	D785	M85(R115)	M85(R115)	M80(R110)	M80(R117)	M80(R115)	M85(R115)	M70	M85(R115)
	12	Hardness, Durometer, Shore D @73 F	-	D2240	D85	D85	D85	-	D85	D85	D85	D85
	13	Izod Impact, (Notched) @73 F	ft-lb/in of notch	D256 TypeA	0.5	0.4	0.5	0.9	0.5	0.4	-	0.4
	14	Coefficient of Friction, (Dry vs. Steel) Dynamic	-	-	0.20	0.16	0.20	0.18	.078	0.20	-	0.20
	15	Limiting PV, (with 4 to 1 factor of safety applied)	psi-ft/min	-	3000	10000	3000	3800	12300	3000	-	3000
THERMAL	16	Coefficient of Linear Thermal Expansion @73 F	in/in/F	E-831 (TMA)	4.0E-05	5.5E-05	5.0E-05	5.9E-05	5.0E-05	3.5E-05	3.5E-05	3.5E-05
	17	Heat Deflection Temperature @ 264 psi	F	D648	200	200	200	-	200	200	200	200
	18	Tg-Glass transition temperature, (Amorphous)	F	D3418	-	-	-	-	-	-	-	-
	19	Melting Point, (VS=Vicat Softening Temp.)	F	D3418	500	500	420	420	420	420	420	420
	20	Continuous Service Temperature in Air, (Max.)	F	-	220	220	200	200	200	260	-	200
	21	Thermal Conductivity	BTU-in/hr-ft2-F	-	1.7	-	-	-	-	-	-	-
ELECTRICAL	22	Dielectric Strength, Short Term	Volts/mil	D149	350	350	400	-	400	500	-	500
	23	Volume Resistivity	ohm-cm	D257	2.5E+13	2.5E+13	2.5E+13	-	2.5E+13	2.5E+13	-	2.5E+13
	24	Dielectric Constant @ 10E6 Hz	-	D150	-	-	3.7	-	-	3.7	3.7	3.7
	25	Dissipation Factor @ 10E6 Hz	-	D150	-	-	-	-	-	-	-	-
	26	Flammability @ 3.1 mm unless noted	-	UL94	V-2	HB	HB	HB	HB	HB	HB	HB
H_2O	27	Water Absorbtion, Immersion, 24 Hrs	% by wt.	D570(7)	0.30	0.30	0.30	0.22	0.25	0.30	0.30	0.30
	28	Water Absorbtion, Saturation	% by wt.	D570(7)	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00