



Nyloil (Cast Nylons)

Oil-filled, cast nylon

ASTM PROPERTY	UNITS	TEST METHOD	NYLOIL	NYLOIL-FG	NYLOIL-MDX
TEST OR PUBLISHED					
SP GRAV.		D792	1.14-1.15	1.14-1.15	1.14-1.15
TENSILE STRENGTH	PSI	D638	9,500-11,000	9,500-11,000	10,500-11,000
TENSILE ELONGATION	%	D638	45-55	45-55	35-45
TENSILE MODULUS	PSI	D638	375,000-475,000	375,000-475,000	425,000-475,000
COMPRESSIVE STRENGTH (@ 10% OFF SET)	PSI	D695	12,000-14,000	12,000-14,000	13,500-14,000
COMPRESSIVE MODULUS	PSI	D695	275,000-375,000	275,000-375,000	325,000-375,000
FLEXURAL STRENGTH	PSI	D790	14,000-16,000	14,000-16,000	15,500-16,000
FLEXURAL MODULUS	PSI	D790	375,000-475,000	375,000-475,000	425,000-475,000
SHEAR STRENGTH	PSI	D732	8,000-9,000	8,000-9,000	8,000-9,000
NOTCHED IZOD	FT-LBS/IN	D256	1.4-1.8	1.4-1.8	1.4-1.8
TENSILE IMPACT	FT-LBS/SQ.IN	D1822	33-36	33-36	33-36
ROCKWELL	R	D785	100-115	100-115	100-115
MELT POINT	DEG.F	D789	450+/-10	450+/-10	450+/-10
COEF. OF LINEAR THERMAL EXP.	IN/IN/DEG.F	D696	5.0X10 ⁻⁵	5.0X10 ⁻⁵	5.0X10 ⁻⁵
DEFORM UNDER LOAD	%	D621	0.7-0.8	0.7-0.8	0.7-0.8
DEFLECT. TEMP.					
264 PSI	DEG.F	D648	200-400	200-400	200-400
66 PSI	DEG.F	D648	400-430	400-430	400-430
CONT SERV. TEMP.	DEG.F		230	230	230
INTER. SERV. TEMP.	DEG.F		330	330	330
WATER ABSORPTION					
24 HR.	%	D570	.5-.6	.5-.6	5-.6
SAT.	%	D570	2.0-2.5	2.0-2.5	2.0-2.5
COEFF. OF FRICTION					
DYNAMIC			.12	.12	.12
MAX PV.					
UNLUBED @ 40 FPM	PSI x FPM		16,000	16,000	16,000
WEAR FACTOR K			4	4	4

Physical Properties

Because of the presence of oil in the matrix of the nylon, NYLOIL exhibits superior physical properties including notched load impact (NYLOIL is two times less likely to break under load impact than a regular cast nylon), improved elongation (twice the elongation of 6PA Natural), coefficient of friction (because oil is constantly present at the material's surface) and water absorption (the oil in the matrix leaves less room for water to be absorbed).