PLASTIC SUPPLY, INC.

Cast Nylon Properties

Property	Natural Nylon	Oil-filled Nylon	SL Nylon
Specific Gravity	1.15 g/cm^3	1.14 g/cm^3	1.13 g / cm^3
Tensile Strength	10,500 – 12,000 PSI	10,000 PSI	8,500 – 10,000 PSI
Compressive Strength @ 10% Deflection	15,000 PSI	14,000 – 15,000 PSI	12,000 PSI
Elongation	30 – 40 %	35 – 40 %	40 – 50%
Tensile Modulus	460,000 PSI	435,000 PSI	390,000 PSI
Tensile Impact, 73°F	80 – 130 ft lbs / in	80 - 130 ft lbs / in	1.2 – 1.5 ft lbs / in
Flexural Strength	17,000 PSI	13,000 PSI	16,300 PSI
Flexural Modulus	330,000 PSI	350,000 PSI	320,000 PSI
Coefficient of Friction	.36 – .42 dry vs. steel	.17 – .19 dry vs. steel	.15 - .3 dry vs. steel
24 Hour H2O	0.5 %	0.3 %	0.35 %
Equilibrium H2O	1.25 – 4 %	1.0 – 2.8%	.5 – 2.5 %
Hardness	80 Scale D	80 Scale D	77 – 78 Scale D
Coefficient of Thermal Expansion	5.5 x 10^{-5} in / in / F	5.5 x 10^{-5} in / in / F	5.5 x 10^{-5} in / in / F
Continuous Operating Temp	220 - 250 F	220 - 250 F	200 – 230 F

Cast Nylon Highlights

Natural Nylon	Natural cast nylon offers the excellent abrasion resistance, and dimensionally stable qualities inherent of all cast nylon grades. In addition, Natural conforms to US F.D.A 21CFR177.1500 making it ideal for components in the food processing industry. As with many cast nylon grades, our unique casting process coupled with our commitment to flexibility enable us to produce a wide variety of custom cast components as well as standard rod, plate and tube sizes.
Oil-filled Nylon	A special forumulation of liquid lubricant encapsulated during the manufacturing process provides for true lubrication at the bearing surface. Oil-filled grades of cast nylon are ideal where the addition of external lubricants is unfeasible or undesirable. As an added benefit oil-filled cast nylon limits moisture absorption. FDA grades are available.
High Performance Nylon	The impact resistance of the copolymer with the wear resistance of SL (solid lubricant) result in the longest lasting material for the most aggressive industrial applications. The SL grade excels in areas that require extreme wear and extreme abrasion resistance. Typical applications include gears, sprockets, power transmission components, extreme outdoor environments, valve seats, back-up rings, butterfly valves, stem bushings, bearing blocks, impact pads and torsion couplings.

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