



SmithPlast™ Nylon

PRODUCT

SmithPlast® Nylon is a strong, stiff engineering plastic with outstanding bearing and wear properties. It is frequently used to replace metal bearings and bushings, often eliminating the need for external lubrication. Other benefits include a reduction in part weight, less operating noise, and decreased wear on mating parts.

Nylon is available in a variety of specialty formulations. Molybdenum disulphide- filled and oil-filled nylons have enhanced wear properties; while heat stabilized nylon will withstand higher operating temperatures. For enhanced strength and stiffness, nylon is also available in glass-filled grades.

In power transmission applications billets made with nylon and a metal core combine the performance advantages of nylon and metal into one cohesive unit. The billets can be manufactured into many different components including gears, rollers, sprockets, and augers

TECHNICAL DATA

Key Characteristics	Units	Extruded Nylon 6/6	Cast Nylon 6
Tensile Strength	Psi	12,400	10,000 - 13,500
Flexural Modulus	Psi	410,000	420,000 - 5,00,000
IZOD Impact (Notched)	Ft-lbs./in. of notch	1.2	0.7 - 0.9
Heat Deflection temperature @ 264 Psi	°F	194	200 - 400
Maximum continuous service temperature in air	°F	210	230
Water Absorption (immersion 24 hours)	%	1.20	0.60 - 1.20
Co-efficient of Thermal expansion	In./in./°F * 10-5	4.5	5.0
Co-efficient of Dynamic Friction		0.28	0.22

All values are attributes of the used raw materials.

The physical data contained in this table are typical values. They are obtained on test specimens under specific conditions and represent average values of a large number of tests. The results obtained on these tests specimens cannot be applied to finished parts without reservations, as behaviour is influenced by processing and shaping.