



MANUFACTURING CORPORATION

- Plastics Machining
- Spring Energized Seals
- Rotary Lip Seals

Material Data Sheet

Material: Teacamid® 6/6

Nylon

Tecamid® 6/6 is a general purpose standard grade of nylon. Nylon was the first engineering resin. It has been used in applications ranging from electronic, marine, and automotive industries. Nylon has outstanding wear resistance and low frictional properties. It has very good temperature, chemical, and impact properties. However Nylon's one weakness is a propensity to absorb moisture and thus have poor dimensional stability.

Mechanical Properties	ASTM Test Method	Value	Units
Density	D792	0.0412	lbs/in ³
Specific Gravity	D792	1.14	g/cc
Water Absorption @ 24 hours, 73°F	D570	1.2	%
@ Saturation, 73°F	D570	8.5	%
Tensile Strength, 73°F	D638	100,000	psi
Tensile Modulus	D639	350,000	psi
Elongation (at break), 73°F	D638	25	%
Flexural Strength, 73°F	D790	15,500	psi
Flexural Modulus, 73°F	D790	440,000	psi
Compressive Strength	D695	5,000	psi
Izod Impact Strength, 73°F	D256	1	ft-lb/in of notch
Rockwell Hardness, 73°F	D785	M - 90	M or R Scale
Shure Hardness			D Scale
Wear Factor Against Steel, 40 psi, 50 fpm	D3702	200 x 10 ⁻¹⁰	in. ³ -min/ft.lbs.hr
Static Coefficient of Friction	D3702		
Dynamic Coefficient of Friction, 40 pcs, 50 fpm	D3702	0.26	
Thermal Properties			
Heat Deflection Temperature @ 66 psi	D648	455	°F
@ 264 psi	D648	194	°F
Coefficient of Linear Thermal Expansion	D696	4.5 X 10 ⁻⁵	in/in./°F
Continuous Servicing Temperature, Intermittent		300	°F
Long Term	UL746B	185	°F
Specific Heat		0.4	BTU/lb -°F
Thermal Conductivity			
Melting Point	D2133	491	°F
Flammability	UL94	V-2 (3.0)	(mm)
Electrical Properties			
Surface Resistivity	D257		ohm/square
Volume Resistivity	D257	10 ¹⁵	ohm - cm
Dielectric Strength	D149	300-400	Volts/mil
Dielectric Constant, 60 Hz, 73°F, 50% RH	D150	4	
Dissipation Factor, 60 HZ, 73°F	D150	0.01	

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*The values shown in these and the following charts are typical, average properties. Actual values may differ due to variations in resin formulations and processing methods. These values are obtained from sources believed to be reliable, including the resin manufactures, converters and other published sources. However, they should not be used for specification or design purposes. The above information is provided by Ensinger Hyde.