



MANUFACTURING CORPORATION

- Plastics Machining
- Spring Energized Seals
- Rotary Lip Seals

Material Data Sheet

Material: Tecamid® HS

Nylon

Tecamid® HS is a type 6/6 nylon that is heat stabilized. It has the increased ability to withstand the negative effects of heat exposure and increased overall service temperature over Tecamid® HS. 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		%
@ Saturation, 73°F	D570		%
Tensile Strength, 73°F	D638	10,000	psi
Tensile Modulus	D639	350,000	psi
Elongation (at break), 73°F	D638	25	%
Flexural Strength, 73°F	D790		psi
Flexural Modulus of Elasticity, 73°F	D790	440,000	psi
Compressive Strength	D695		psi
Izod Impact Strength, 73°F	D256	1.2	ft-lb/in of notch
Rockwell Hardness, 73°F	D785		M or R Scale
Shure Hardness			D Scale
Wear Factor Against Steel, 40 psi, 50 fpm	D3702		in. ³ -min/ft.lbs.hr
Static Coefficient of Friction	D3702		
Dynamic Coefficient of Friction, 40 pcs, 50 fpm	D3702		
Thermal Properties			
Heat Deflection Temperature @ 66 psi	D648	392	°F
@ 264 psi	D648	194	°F
Coefficient of Linear Thermal Expansion	D696	6.7 X 10 ⁻⁵	in/in./°F
Continuous Servicing Temperature, Intermittent			°F
Long Term	UL746B		°F
Specific Heat			BTU/lb -°F
Thermal Conductivity			
Melting Point	D2133	504	°F
Flammability	UL94	HB (.75)	(mm)
Electrical Properties			
Surface Resistivity	D257		ohm/square
Volume Resistivity	D257		ohm - cm
Dielectric Strength	D149		Volts/mil
Dielectric Constant, 60 Hz, 73°F, 50% RH	D150		
Dissipation Factor, 60 HZ, 73°F	D150		

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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 manufacturers, converters and other published sources. However, they should not be used for specification or design purposes. The above information is provided by Ensinger Hyde.