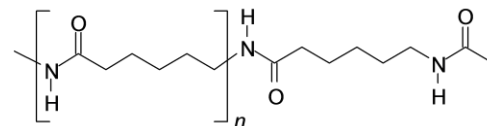


Polyamide (cast PA12)

SPECIFICATIONS

Property	Spec	Value
Specific Gravity	ASTM D792	1.03g/cc
Tensile Strength	ASTM D638	7,900psi
Tensile Elongation	ASTM D638	>50 %
Tensile Modulus	ASTM D638	230,000psi
Compressive Strength Compressive Modulus	ASTM D695 ASTM D695	10,000psi 224,000psi
Flexural Strength Flexural Modulus	ASTM D790 ASTM D790	9,000psi 238,000psi
Shear Strength	ASTM D732	6,100psi
Notched Izod Impact	ASTM D256	3.02 ft. lbs./in.
Hardness Rockwell Hardness Shore D	ASTM D785 ASTM D2240	108R 76
Melting Point	ASTM D789	351 deg F
Coefficient of Linear Thermal Expansion	ASTM D696	5.5 x10 ⁻⁵ in./in./deg.
Deformation Under Load	ASTM D621	F
Deflection Temp: 264psi 66psi	ASTM D648 ASTM D648	124°F 347°F
Continuous Service Temp Intermittent Service Temp		250°F 300°F
Coefficient of Friction: Dynamic		.2 - .3
Water Absorption 24 hours Saturation	ASTM D570 ASTM D570	0.12% 0.66%
Dielectric Strength Dielectric Constant	ASTM D149 ASTM D150	500-600v/mil -
60 cycles 1,000 cycles 100,000 cycles		3.7 3.7 3.7



DESCRIPTION

ML62 is polyamide material with hardness of 108 Rockwell R and 76 Shore D. Polyamides (PA) have amide functional group linkages -CO-NH-. The amide group has strong affinity for hydrogen bonding with other amide groups and with water from the external environment. The two major commercial polyamide materials used in seal industries are PA 6 and PA 6,6. They differ by whether one or two raw material components are used in producing polyamide. In many aspects, they are interchangeable in applications. Both polyamide thermoplastics are flexible and allowing for easy crystallization. This capability is even enhanced by the strong affinity for polar amide groups of adjacent chain sections. Less amide content in the polymer means fewer tendencies for polyamides to bind water. PA's lubrication can be further improved by incorporating molybdenum disulfide (MoS₂). The mechanical strength of PA can be increased by reinforcement with glass fiber. PA articles are normally molded by injection, extrusion or compression processes.