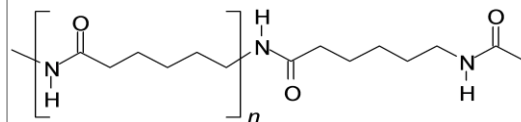


## Polyamide (PA or nylon)

### SPECIFICATIONS

Property	Spec	Value
Specific Gravity	D 792	1.15-1.17 g/cm <sup>3</sup>
Tensile Strength	D 638	10,000-13,500 psi
Tensile Elongation	D 638	20-55 %
Tensile Modulus	D 638	400,000-550,000 psi
Compression Strength Compressive Modulus	D 695 D 695	13,500-16,000 psi 325,000-400,000 psi
Flexural Strength Flexural Modulus	D 790 D 790	15,000-17,500 psi 420,000-500,000 psi
Shear Strength	D 732	10,000-11,000 psi
Notched Izod Impact	D 256	1.5-2.5 ft. lbs./in
Hardness Rockwell Hardness, Shore	D 785 D 2240	110-115 R 78-84 D
Melting Point	D 3418	430 ± 10 °F
Coefficient of Linear Thermal Expansion	D 696	5.0* 10 <sup>-5</sup> in./in./°F
Deformation Under Load	D 621	0.5-2.5%
Deflection Temperature 264 psi 66 psi	D 648 D648	200-300°F 300-400°F
Continuous Service Temperature Intermittent Service Temperature	-	230°F 330°F
Coefficient of Friction, Dynamic	D 1894	0.26
Water Absorption 24 hrs. Saturation	D 570 D570	0.5-0.6% 4.0-6.0%
Dielectric Strength	D 149	500-600 v/mil.
Dielectric Constant 60 Hz 1000 Hz 1 MHz	D 150 D 150 D 150	3.7 3.7 3.7
Color		Natural



### DESCRIPTION

MLO2 is a PA or nylon material with hardness 85 Shore D especially made as bearing material. Polyamide (PA or nylon) 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 nylon materials used in seal industries are nylon 6 and nylon 6,6. They differ by whether one or two raw material components are used in producing nylon. In many aspects, they are interchangeable in applications. Both nylon 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 less tendency for nylon to bind water. Nylon's lubrication can be further improved by incorporating molybdenum disulfide (MoS<sub>2</sub>). The mechanical strength of PA can be increased by reinforcement with glass fiber. PA articles are normally molded by injection, extrusion or compression processes. MLO2 is light-weight, extremely good wear resistance, high tensile strength and high module of elasticity. FDA compliant.