

UNIPA® MLd

Polyamide 6

Nytec Plastics, Ltd.

Message:

Since its introduction in 1938, Nylon has become one of the world's most widely recognized and utilized engineering grade thermoplastics. Nylon's unique combination of high strength, good toughness, outstanding chemical resistance, and excellent wear and abrasion resistance have made it the material of choice for product designs in a multitude of industries. When used to replace wear grade metals like brass and bronze, no other material provides the combination of extended wear life, light weight, and low fabricated part cost of Nylon. Nytec Plastics, Ltd. manufactures UNIPA® Nylon stock shapes in a wide variety of types and stock shape configurations. These UNIPA Nylon products fall into the categories of Type 6/6 Extruded UNIPA Nylons and Type 6 UNIPA M Cast Nylons. While both types of Nylon are very similar, there are performance and availability differences between the two grades that should be noted:

UNIPA M Type 6 Cast Nylons:

offer improved wear resistance

are available in larger rod diameters (up to 13" dia.)

are available in larger plate sizes (up to 48" x 96")

Nytec Plastics utilizes a proprietary nylon casting process to produce UNIPA M Nylon 6 stock shapes. This process allows Nylon rods, plates, and tubular bars with very thick cross sections to be economically produced with uniform physical properties and minimal internal stress levels. Nytec Plastic's UNIPA M Nylon 6 stock shapes are available in a wide range of grades including

lubricated, heat stabilized, and fiber reinforced products. UNIPA M Nylon 6 materials are offered in a complete range of round rod, heavy gauge plate, and tubular bar sizes.

General Information	
Additive	Molybdenum Disulfide Lubricant
Features	Good Abrasion Resistance Good Chemical Resistance Good Toughness Good Wear Resistance High Stiffness High Strength Lubricated Machinable
Uses	Automotive Applications Bearings Bushings Construction Applications Electrical Parts Electrical/Electronic Applications Fluid Handling Food Service Applications Gears Mining Applications Molds/Dies/Tools Pulleys Pump Parts

Rollers
 Textile Applications
 Valves/Valve Parts
 Wear Strip
 Wheels

Forms	Preformed Parts
	Rod

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.16	g/cm ³	ASTM D792
Water Absorption			ASTM D570
24 hr	0.80	%	
Saturation	6.0	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	85		
R-Scale	115		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3100	MPa	ASTM D638
Tensile Strength	79.3	MPa	ASTM D638
Tensile Elongation (Break)	20 to 40	%	ASTM D638
Flexural Modulus	3450	MPa	ASTM D790
Flexural Strength	110	MPa	ASTM D790
Compressive Strength	110	MPa	ASTM D695
Coefficient of Friction	0.25		ASTM D1894
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	43	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	98.9	°C	ASTM D648
Continuous Use Temperature	98.9	°C	Internal Method
Peak Melting Temperature	221	°C	ASTM D3418
CLTE - Flow	7.2E-5	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+13	ohms · cm	ASTM D257
Dielectric Strength ¹	14	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	3.70		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating	HB		UL 94

NOTE			
1.	Method A (Short-Time)		

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