NYTEF PLASTICS

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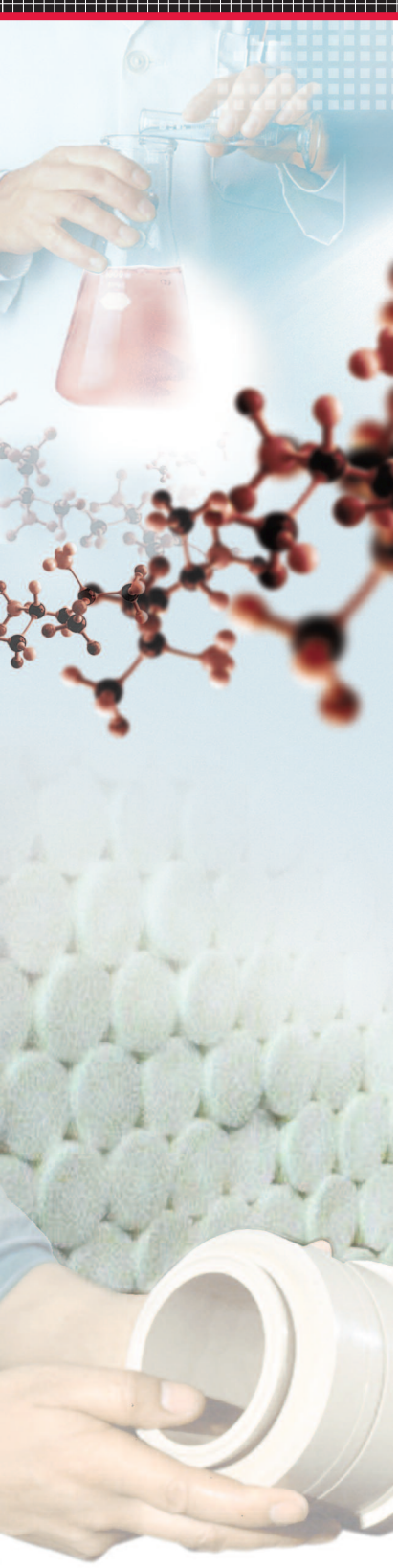

UNIPA® Cast Nylon 6

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.

Nytef Plastics utilizes a nylon casting process to produce UNIPA 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. Nytef Plastic's UNIPA cast Nylon 6 stock shapes are available in a wide range of grades including both lubricated, heat stabilized, and fiber reinforced products.

UNIPA NYLON 6 ATTRIBUTES

- 210˚F continuous use temperature
- High strength and stiffness
- Excellent toughness
- Superior wear and abrasion resistance
- Outstanding resistance to chemical attack
- Easily machined and fabricated

MONOCAST NYLON 6 PRODUCTS

UNIPA M – Unfilled Nylon 6 Natural and Blue Colors

- 210˚F continuous use temperature

UNIPA MLd – Molybdenum Disulfide (MoS_2) filled Nylon 6

- Improved wear resistance

UNIPA Mh – Heat stabilized Nylon 6

- Improved stiffness at elevated temperatures

UNIPA MLo – Oil filled Nylon 6

- Improved wear resistance
- Low coefficient of friction

UNIPA MRg – Glass fiber reinforced Cast Nylon 6

- Improved strength and stiffness

INDUSTRIES

- Food and dairy processing
- Material handling
- Fluid handling
- Electronics manufacturing
- Automotive
- Paper manufacturing
- Textile production
- Construction
- Mining

APPLICATIONS

- Pistons
- Valves
- Manifolds
- Food product forming dies
- Timing screws
- Scraper blades
- Wear strips
- Pump components
- Gears
- Bushings and bearings
- Electrical components

Nytef Plastics, Ltd. is dedicated to supplying our customers with the highest quality thermoplastic stock shapes for machining. We manufacture and stock a full line of thermoplastic materials in a wide variety of rod, plate and tubular bar sizes. In addition, we offer over 35 years of experience in the custom extrusion of application-specific and proprietary resins to meet even the most demanding performance requirements. Nytef Plastics offers full technical support for all products and is certified to ISO 9002 standards for the manufacture of extruded plastics stock shapes.

UNIPA® CAST NYLON 6

Property	Test Method	Units	UNIPA M	UNIPA MLd	UNIPA Mh	UNIPA MLo	UNIPA MRg
			Unfilled Nylon 6	MoS_2 filled Nylon 6	Heat Stabilized Nylon 6	Oil filled Nylon 6	30% Glass Fiber filled Nylon 6
Mechanical							
Specific Gravity	ASTM-D792	---	1.15	1.16	1.15	1.14	1.32
Tensile Strength	ASTM-D638	psi	12,000	11,500	12,000	10,000	11,500
Tensile Elongation	ASTM-D638	%	20-60	20-40	20-60	20-60	8
Tensile Modulus of Elasticity	ASTM-D638	psi	350,000	350,000	350,000	350,000	
Flexural Strength	ASTM-D790	psi	15,500	16,000	15,500	15,000	17,000
Flexural Modulus of Elasticity	ASTM-D790	psi	350,000	350,000	350,000	325,000	
Compressive Strength	ASTM-D695	psi	15,000	16,000	15,000	12,500	25,000
Izod Notched Impact	ASTM-D256	ft.-lb./in.	0.8	0.8	0.8	1.6	1.0
Rockwell Hardness	ASTM-D785	M or R scale	M85(R115)	M85(R115)	M85(R115)	M85(R112)	M100
Thermal							
Coef. of Linear Thermal Expansion	ASTM-D696	in./in./°F	4.0×10^{-5}	4.0×10^{-5}	4.0×10^{-5}	5.0×10^{-5}	1.5×10^{-5}
Max. Continuous Use Temp.	Nytef std.	°F	210	210	210	210	210
Heat Deflection Temp. @ 264 psi	ASTM-D648	°F	210	210	210	200	300
Melting Point	ASTM-D3418	°F	430	430	430	430	430
Electrical							
Dielectric Strength-Short Term	ASTM-D149	volts/mil	400	350	400	400	500
Dielectric Constant @ 10^6 Hz	ASTM-D150		3.7	3.7	3.7	3.7	3.7
Dissipation Factor @ 60 Hz	ASTM-D150		0.02		0.02	0.02	0.02
Volume Resistivity	ASTM-D257	ohm-cm	$>10^{13}$	$>10^{13}$	$>10^{13}$	$>10^{13}$	$>10^{13}$
Miscellaneous							
Water Absorption/24 hrs.	ASTM-D570	% weight	0.8	0.8	0.8	0.6	0.4
Water Absorption @ Saturation	ASTM-D570	% weight	6.0	6.0	6.0	4.0	3.5
Flammability	UL-94		HB	HB	HB	HB	HB
Dynamic Coefficient of Friction			0.26	0.25	0.26	0.14	0.33
Agency Compliance							
FDA/USDA			Yes	No	No	Yes	No
3-A Dairy			Yes	No	No	Yes	No

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