

# UNIPA® Rk

Polyamide 66

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 Type 6/6 Extruded Nylons:

offer improved toughness

offer improved flame resistance

are available in smaller rod diameters (< 2" dia.)

Nytec Plastic's UNIPA Nylon 6/6 extruded stock shapes are available in a wide range of grades— including both lubricated and fiber reinforced products.

UNIPA Nylon 6/6 materials are offered in a complete range of extruded round, square, and hex rod, heavy gauge plate, and tubular bar sizes.

General Information	
Filler / Reinforcement	Kevlar Fiber
Features	Flame Retardant
	Food Contact Acceptable
	Good Abrasion Resistance
	Good Chemical Resistance
	Good Toughness
	Good Wear Resistance
	High Stiffness
	High Strength
	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

Agency Ratings	FDA Unspecified Rating
Appearance	Gold
Forms	Preformed Parts Rod

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.18	g/cm <sup>3</sup>	ASTM D792
Water Absorption			ASTM D570
24 hr	1.0	%	
Saturation	8.0	%	

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	102	MPa	ASTM D638
Tensile Elongation (Break)	4.0 to 5.0	%	ASTM D638
Flexural Modulus	4240	MPa	ASTM D790
Flexural Strength	131	MPa	ASTM D790
Coefficient of Friction	0.30		ASTM D1894

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	53	J/m	ASTM D256

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	232	°C	ASTM D648
Continuous Use Temperature	98.9	°C	Internal Method
Peak Melting Temperature	262	°C	ASTM D3418
CLTE - Flow	9.0E-5	cm/cm/°C	ASTM D696

Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+15	ohms · cm	ASTM D257
Dielectric Strength <sup>1</sup>	14	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
1 MHz	3.40		
60 MHz	4.00		
Dissipation Factor (60 Hz)	0.010		ASTM D150

Flammability	Nominal Value	Unit	Test Method
Flame Rating	HB		UL 94

NOTE			
1.	Method A (Short-Time)		

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## Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



WECHAT