

Quadrant EPP Nylon 101

Polyamide 66

Quadrant Engineering Plastic Products

Message:

Nylon 101 is an extruded form of polyamide, offering rigidity, strength, wear resistance, and heat resistance to 210°F. It is commonly used in both structural and general-purpose bearing and wear applications. This material is available in natural and black. The natural material is compliant with FDA, USDA, NST, and 3A-Dairy regulations.

General Information			
Features	Good Strength		
	Good Wear Resistance		
	Hydrocarbon Resistant		
	Machinable		
	Medium Heat Resistance		
	Medium Rigidity		
Uses	Bearings		
	Structural Parts		
Agency Ratings	FDA Unspecified Rating		
	USDA Unspecified Approval		
Appearance	Black		
	Natural Color		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.15	g/cm ³	ASTM D792
Water Absorption			ASTM D570
24 hr	0.30	%	
Saturation	7.0	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	85		
R-Scale	115		
Durometer Hardness (Shore D)	80		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2930	MPa	ASTM D638
Tensile Strength (Ultimate)	82.7	MPa	ASTM D638
Tensile Elongation (Break)	50	%	ASTM D638
Flexural Modulus	3100	MPa	ASTM D790

Flexural Strength (Yield)	103	MPa	ASTM D790
Compressive Modulus	2900	MPa	ASTM D695
Compressive Strength (10% Strain)	86.2	MPa	ASTM D695
Shear Strength	68.9	MPa	ASTM D732
Coefficient of Friction (vs. Steel - Static)	0.25		Internal Method
Wear Factor	160	10 ⁻⁸ mm ³ /N·m	ASTM D3702
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	32	J/m	ASTM D256A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	93.3	°C	ASTM D648
Maximum Use Temperature - Long Term, Air	99	°C	
Limiting Pressure Velocity ¹	0.0946	MPa·m/s	Internal Method
Peak Crystallization Temperature (DSC)	260	°C	ASTM D3418
CLTE - Flow ² (-40 to 149°C)	9.9E-5	cm/cm/°C	ASTM E831
Thermal Conductivity	0.25	W/m/K	ASTM F433
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity ³	> 1.0E+13	ohms	Internal Method
Dielectric Strength ⁴	16	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	3.60		ASTM D150
Dissipation Factor (1 MHz)	0.020		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating (3.18 mm, Estimated Rating)	V-2		UL 94
NOTE			
1.	4:1 safety factor		
2.	68°F		
3.	EOS/ESD S11.11		
4.	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



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