

Nylon 101

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.

Property	Method	Unit	Value
Mechanical			
Specific Gravity, 73°F	D792		1.15
Tensile Strength, 73°F	D638	psi	11,500
Tensile Modulus of Elasticity, 73°F	D638	psi	425,000
Elongation, 73°F	D638	%	50.0
Flexural Strength, 73°F	D790	psi	15,000
Flexural Modulus, 73°F	D790	psi	450,000
Shear Strength, 73°F	D732	psi	10,000
Compressive Strength, 10% Def., 73°F	D695	psi	12,500
Compressive Modulus of Elasticity, 73°F	D695	psi	420,000
Hardness, Rockwell, Scale as noted, 73°F	D785		M85 (R115)
Hardness, Durometer, Shore D scale, 73°F	D2240		D80
Izod Impact (notched), 73°F	D256 Type A	ft-lb/in	0.6
Coefficient of Friction (Dry vs Steel) Dynamic	PTM55007		0.25
Limiting PV, 73°F	PTM55007	psi-fpm	2,700
k (wear) factor	PTM55010		80
Thermal			
Coefficient of linear Thermal Expansion	E-831(TMA)	in/in/°F	4.70 x 10 ⁻⁵
Deflection Temperature 264 psi	D648	°F	200
Melting Point (crystalline) peak	D3418	°F	500
Continuous Service Temperature in Air (Max.)		°F	210
Thermal Conductivity		BTU-in/(hr-ft ² °F)	1.70

For additional information about our products call 1-800-366-0300 or via e-mail at select.support@qplas.com

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Product Data Sheet



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Property	Method	Unit	Value
Electrical			
Dielectric Strength, Short Term	D149(2)	Volts/mil	400
Surface Resistivity	EOS/ESD S11.11	Ohm/square	10 ¹³
Dielectric Constant, 10 ⁶ Hz	D150(2)		3.60
Dissipation Factor, 10 ⁶ Hz	D150(2)		0.020
Chemical			
Acids, Weak, 73°F/23°C, acetic acid, dilute hydrochloric or sulfuric			Limited Service
Acids, Strong, 73°F/23°C, conc. hydrochloric or sulfuric			Unacceptable
Alkalies, Weak, 73°F/23°C, dilute ammonia or sodium hydroxide			Limited Service
Alkalies, Strong, 73°F/23°C, conc. ammonia or sodium hydroxide			Unacceptable
Hydrocarbons-Aromatic, 73°F/23°C, benzene, toluene			Acceptable Service
Hydrocarbons-Aliphatic, 73°F/23°C, gasoline, hexane, grease			Acceptable Service
Ketones, Esters, 73°F/23°C, acetone, methyl ethyl ketone			Acceptable Service
Ethers, 73°F/23°C, diethyl ether, tetrahydrofuran			Acceptable Service
Chlorinated Solvents, 73°F/23°C, methylene chloride, chloroform			Limited Service
Alcohols, 73°F/23°C, methanol, ethanol, anti-freeze			Limited Service
Inorganic Salt Solutions, 73°F/23°C, sodium chloride, potassium cyanate			Acceptable Service
Continuous Sunlight, 73°F/23°C			Limited Service
Miscellaneous			
Water Absorption Immersion, 24 hr	D570	%	0.30
Water Absorption Immersion, Sat.	D570	%	7.00
Outgassing TML (Total Mass Loss)	E595	%	2.40
CVCM (Collected Volatile Condensable Material)	E595	%	0.00
WVR(Water Vapor Regained)	E595	%	0.90
Compliance			
UL94			V-2
FDA			Yes
USDA			Yes
NSF			Yes
3A-Dairy			Yes

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