

## Quadrant EPP Nylatron® NSM PA 6 + internal lubricant, cast (ISO Data)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , Cast

### Material Notes:

Nylatron NSM is a proprietary cast nylon 6 formulation containing solid lubricant additives which grant this materials self-lubricity, excellent frictional behaviour, superior wear resistance and outstanding pressure-velocity capabilities (up to 5 times higher than conventional cast nylons). Being particularly suited for higher velocity, unlubricated moving parts applications, it is the perfect complement to the oil-filled grade Ertalon LFX High mechanical strength, stiffness, hardness and toughness Good fatigue resistance High mechanical damping ability Good sliding properties Excellent wear resistance Good electrical insulating properties Good resistance to high energy radiation (gamma- and X-rays) Good machinability

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Quadrant-EPP-Nylatron-NSM-PA-6-internal-lubricant-cast-ISO-Data.php](http://www.lookpolymers.com/polymer_Quadrant-EPP-Nylatron-NSM-PA-6-internal-lubricant-cast-ISO-Data.php)

Physical Properties	Metric	English	Comments
Density	1.14 g/cc	0.0412 lb/in <sup>3</sup>	ISO 1183-1
Moisture Absorption at Equilibrium	2.0 %	2.0 %	50% RH
Water Absorption at Saturation	6.3 %	6.3 %	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	81	81	ISO 2039-2
Hardness, Shore D	76	76	
Ball Indentation Hardness	150 MPa	21800 psi	ISO 2039-1
Tensile Strength	80.0 MPa	11600 psi	at Yield; ISO 527-1/-2
Elongation at Break	25 %	25 %	ISO 527-1/-2
Elongation at Yield	5.0 %	5.0 %	ISO 527-1/-2
Tensile Modulus	3.15 GPa	457 ksi	ISO 527-1/-2
Flexural Strength	109 MPa	15800 psi	
Flexural Modulus	2.80 GPa	406 ksi	
Compressive Strength	31.0 MPa	4500 psi	ISO 604
	@Strain 1 %	@Strain 1 %	
	59.0 MPa	8560 psi	ISO 604
	@Strain 2 %	@Strain 2 %	
	87.0 MPa	12600 psi	ISO 604

Mechanical Properties	@Strain 5 % Metric	@Strain 5 % English	Comments
K Factor (ISO)	4.5 µm/km	4.5 µm/km	
Charpy Impact Unnotched	7.50 J/cm <sup>2</sup>	35.7 ft-lb/in <sup>2</sup>	ISO 179-1/1eU
Charpy Impact, Notched	0.350 J/cm <sup>2</sup>	1.67 ft-lb/in <sup>2</sup>	ISO 179-1/1eA
Coefficient of Friction, Dynamic	0.20 - 0.35	0.20 - 0.35	
Limiting Pressure Velocity	0.250 MPa-m/sec	7140 psi-ft/min	at 1 m/s unlubricated
	0.390 MPa-m/sec	11100 psi-ft/min	at 0.1 m/s unlubricated

Thermal Properties	Metric	English	Comments
CTE, linear	95.0 µm/m-°C	52.8 µin/in-°F	
	@Temperature 23.0 - 100 °C	@Temperature 73.4 - 212 °F	
Thermal Conductivity	0.290 W/m-K	2.01 BTU-in/hr-ft <sup>2</sup> -°F	
Melting Point	215 °C	419 °F	DSC, 10°C/min.; ISO 11357-1/-3
Maximum Service Temperature, Air	90.0 °C	194 °F	Continuous; 20,000 h
	105 °C	221 °F	Continuous; 5,000 h
Deflection Temperature at 1.8 MPa (264 psi)	75.0 °C	167 °F	ISO 75-1/-2
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.0e+14 ohm-cm	>= 1.0e+14 ohm-cm	IEC 60093
Surface Resistivity per Square	>= 1.0e+13 ohm	>= 1.0e+13 ohm	IEC 60093
Dielectric Constant	3.6	3.6	IEC 60250
	@Frequency >=100000 Hz	@Frequency >=100000 Hz	
Dielectric Strength	25.0 kV/mm	635 kV/in	
Dissipation Factor	0.012	0.012	IEC 60250
	@Frequency 100000 Hz	@Frequency 100000 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112

Compliance Properties	Metric	English	Comments
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<b>3A-Dairy Compliance Properties</b>	<b>No Metric</b>	<b>No English</b>	<b>Comments</b>
European Food 1935/2004	No	No	
FDA	No	No	
USP Class VI	No	No	

<b>Chemical Resistance Properties</b>	<b>Metric</b>	<b>English</b>	<b>Comments</b>
Acids, Strong (pH 1-3)	Unacceptable	Unacceptable	
Acids, Weak	Limited	Limited	
Alcohols	Limited	Limited	
Alkalies, Strong (pH 11-14)	Unacceptable	Unacceptable	
Alkalies, Weak	Limited	Limited	
Chlorinated Solvents	Limited	Limited	
Continuous Sunlight	Limited	Limited	
Hot Water / Steam	Limited	Limited	
Hydrocarbons - Aliphatic	Acceptable	Acceptable	
Hydrocarbons - Aromatic	Acceptable	Acceptable	
Inorganic Salt Solutions	Acceptable	Acceptable	
Ketones, Esters	Acceptable	Acceptable	

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