

Quadrant EPP Nylatron® GSM PA 6 + MoS2, cast (ISO Data)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , MoS2 Filled

Material Notes:

Nylatron GSM contains finely divided particles of molybdenum disulphide to enhance its bearing and wear behaviour without impairing the impact and fatigue resistance inherent to unmodified cast nylon grades. It is a very commonly used grade for gears, bearings, sprockets and sheaves. 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-GSM-PA-6-MoS2-cast-ISO-Data.php

Physical Properties	Metric	English	Comments
Density	1.16 g/cc	0.0419 lb/in ³	ISO 1183-1
Moisture Absorption at Equilibrium	2.4 %	2.4 %	50% RH
Water Absorption at Saturation	6.7 %	6.7 %	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	84	84	ISO 2039-2
Hardness, Shore D	80	80	
Ball Indentation Hardness	160 MPa	23200 psi	ISO 2039-1
Tensile Strength	82.0 MPa	11900 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	3.40 GPa	493 ksi	ISO 527-1/-2
Flexural Strength	111 MPa	16100 psi	
Flexural Modulus	3.15 GPa	457 ksi	
Compressive Strength	33.0 MPa	4790 psi	ISO 604
	@Strain 1 %	@Strain 1 %	
	62.0 MPa	8990 psi	
	@Strain 2 %	@Strain 2 %	ISO 604
	91.0 MPa	13200 psi	ISO 604
	@Strain 5 %	@Strain 5 %	

Mechanical Properties	Metric	English	Comments
Charpy Impact Unnotched	NB	NB	ISO 179-1/1eU
Charpy Impact, Notched	0.300 J/cm ²	1.43 ft-lb/in ²	ISO 179-1/1eA
Coefficient of Friction, Dynamic	0.35 - 0.55	0.35 - 0.55	
Limiting Pressure Velocity	0.0800 MPa-m/sec	2280 psi-ft/min	at 1 m/s unlubricated
	0.130 MPa-m/sec	3710 psi-ft/min	at 0.1 m/s unlubricated

Thermal Properties	Metric	English	Comments
CTE, linear	90.0 µm/m-°C @Temperature 23.0 - 100 °C	50.0 µin/in-°F @Temperature 73.4 - 212 °F	
Thermal Conductivity	0.300 W/m-K	2.08 BTU-in/hr-ft ² -°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)	80.0 °C	176 °F	ISO 75-1/-2
Flammability, UL94	HB	HB	
Oxygen Index	25 %	25 %	ISO 4589-1/-2

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 @Frequency >=100000 Hz	3.6 @Frequency >=100000 Hz	IEC 60250
Dielectric Strength	24.0 kV/mm	610 kV/in	
Dissipation Factor	0.012 @Frequency 100000 Hz	0.012 @Frequency 100000 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	IEC 60112

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

Chemical Resistance Properties	Metric	English	Comments
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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