

Product Data Sheet

Product : Quadrant Polypenco Korea Nylatron® MC 901 BLUE - PA6, unfilled, extruded

Categories : Polymer; Thermoplastic; Nylon ; Nylon 6; Nylon 6 , Extruded

Material Notes : This modified extruded nylon 6 grade with its distinctive blue color exhibits high toughness, flexibility and fatigue resistance. It has proved to be an excellent material for gear wheels, racks and pinions. Data provided by Polypenco Korea and Quadrant Engineering Plastic Products

Properties	Units	Test Methods	Nylatron® MC 901 EXTRUDED
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Physical Properties

Specific Gravity	g/cc	ASTM D 792	1.15
Water Absorption, Immersion, 24hr	%	ASTM D 570(2)	-
Water Absorption at Saturation, Immersion	%	ASTM D 570(2)	-

Mechanical Properties

Rockwell Hardness, M	M scale	ASTM D 785	83.3
Rockwell Hardness, R	R scale	ASTM D 785	-
Hardness, Shore D	D	ASTM D 2240	-
Tensile Strength	MPa	ASTM D 638	82.3
Tensile Modulus	GPa	ASTM D 638	3.60
Elongation at Break	%	ASTM D 638	59
Flexural Yield Strength	MPa	ASTM D 790	117
Flexural Modulus	GPa	ASTM D 790	3.163
Compressive Strength	MPa	10% Def.; ASTM D 695	93.9
Compressive Modulus	GPa	ASTM D 695	3.59
Shear Strength	MPa	ASTM D 732	-
Coefficient of Friction; Dry vs. Steel	-	QTM 55007	-
K (wear) Factor	mm ³ /N-M	QTM 55010	-
Limiting Pressure Velocity; 4:1 safety factor	MPa-m/sec	QTM 55007	-
Izod Impact, Notched	J/m	ASTM D 256	44.0

Electrical Properties

Surface Resistivity per Square	Ω	EOS/ESD S11.11	-
Dielectric Constant	-	ASTM D 150	-
Dielectric Strength; Short term	kV/mm	ASTM D 149	-

Thermal Properties

Coefficient of Thermal Expansion; CTE, linear	µm/m-°C	ASTM E 831	-
Thermal Conductivity	W/m-K	ASTM F 433	-
Melting point ; Crystalline, Peak	°C	ASTM D 3418	-
Maximum Service Temperature, Air	°C	Long Term	-
Deflection Temperature at 1.8 Mpa (264psi)	°C	ASTM D 648	-
Flammability, UL94 ; 1/8inch(Estimated Rating)	-	-	HB

Compliance Property Comments

SVHC (Substance of Very High Concern)_REACH	Yes
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Descriptive Properties

Color	Blue
Machinability	1-10, 1=Easier to Machine

Chemical Resistance Properties

Acid, Strong (pH1-3)	Unacceptable
Acids, Weak	Limited
Alcohls	Limited
Alkalies, Weak	Unacceptable
Alkalies, Strong (pH 11-14)	Limited
Chlorinated Solvent	Limited
Conductive / Static Dissipative	No
Continuous Sunlight	Limited
Hot Water / Steam	Limited
Hydrocarbons – Aliphatic	Acceptable
Hydrocarbons – Aromatic	Acceptable
Inorganic Salt Solution	Acceptable
Ketones, Esters	Acceptable

Miscellaneous Properties

Targeted Usage	Load + Bearing
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