

Mitsubishi Chemical Advanced Materials Nylatron® MD PA 6 + metal detectable additive, extruded (ISO Data)
Categories: Polymer; Thermoplastic; Nylon (Polyamide PA); Nylon 6 (PA6)

Material Notes: Metal detectable 6SA grade

- 1 High wear and fatigue resistance
- 1 Lower moisture absorption than standard PA6
- 1 Metal and visual detection by blue colour
- 1 Detection by x-ray also possible
- 1 Continuous use temperature up to 85 °C (185 °F)

Quadrant Engineering Plastic Products is now Mitsubishi Chemical Advanced Materials.

Physical Properties	Metric	English	Comments
Density	1.21 g/cc	0.0437 lb/in ³	ISO 1183-1
Moisture Absorption at Equilibrium	2.5 %	2.5 %	50% RH
Water Absorption at Saturation	6.9 %	6.9 %	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	85	85	ISO 2039-2
Ball Indentation Hardness	170 MPa	24700 psi	ISO 2039-1
Tensile Strength, Yield	87.0 MPa	12600 psi	ISO 527-1/-2
Elongation at Break	25 %	25 %	ISO 527-1/-2
Elongation at Yield	4.0 %	4.0 %	ISO 527-1/-2
Tensile Modulus	4.00 GPa	580 ksi	ISO 527-1/-2
Compressive Strength	35.0 MPa @ Strain 1 %	5080 psi @ Strain 1 %	ISO 604
	67.0 MPa @ Strain 2 %	9720 psi @ Strain 2 %	ISO 604
	92.0 MPa @ Strain 5 %	13300 psi @ Strain 5 %	ISO 604
Charpy Impact Unnotched	8.00 J/cm ²	38.1 ft-lb/in ²	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	0.40 - 0.60	0.40 - 0.60	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.0e+12 ohm-cm	>= 1.0e+12 ohm-cm	IEC 60093
Surface Resistivity per Square	>= 1.0e+11 ohm	>= 1.0e+11 ohm	IEC 60093

Thermal Properties	Metric	English	Comments
CTE, linear	100 µm/m-°C @ Temperature 23.0 - 100 °C	55.6 µin/in-°F @ Temperature 73.4 - 212 °F	
Thermal Conductivity	0.280 W/m-K	1.94 BTU-in/hr-ft ² -°F	
Melting Point	220 °C	428 °F	DSC, 10°C/min.; ISO 11357-1/-3
Maximum Service Temperature, Air	70.0 °C	158 °F	Continuous; 20,000 h
	85.0 °C	185 °F	Continuous; 5,000 h
Deflection Temperature at 1.8 MPa (264 psi)	85.0 °C	185 °F	ISO 75-1/-2
Flammability, UL94	HB	HB	
Oxygen Index	25 %	25 %	ISO 4589-1/-2

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



Email: info@polymershapes.com

Call: 1 (866) 437-7427

www.polymershapes.com