

Murtfeldt Murdopol® Nylon 12

Category : Polymer , Thermoplastic , Nylon , Nylon 12 , Nylon 12, Cast

Material Notes:

Murdopol® has extremely high shock and impact resistance characteristics and good emergency running characteristics thanks to its high wear resistance. The main advantage of this material is its fantastic ability to create firm plastic/metal connections. Special Properties:• Good shock and impact resistance• Low residual stress• Metal core surrounded by cast plastic available• Good damping and vibration behavior• Lowest moisture absorption of all polyamides• Good resistance to chemicals• Dimensionally stable Information provided by Murtfeldt Kunststoffe GmbH & Co. KG.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Murtfeldt-Murdopol-Nylon-12.php

Physical Properties	Metric	English	Comments
Density	1.03 g/cc	0.0372 lb/in ³	ISO 1183-1
Moisture Absorption at Equilibrium	0.90 % @Temperature 23.0 °C	0.90 % @Temperature 73.4 °F	50% RH
Water Absorption at Saturation	1.4 % @Temperature 23.0 °C	1.4 % @Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	78	78	DIN 53505
Tensile Strength, Yield	55.0 MPa	7980 psi	dry; ISO 527-1
	55.0 MPa	7980 psi	50% RH; ISO 527-1
Elongation at Break	200 %	200 %	dry; ISO 527-1
	200 %	200 %	50% RH; ISO 527-1
Modulus of Elasticity	2.00 GPa	290 ksi	dry
	2.00 GPa	290 ksi	50% RH
Charpy Impact Unnotched	NB	NB	ISO 179
Charpy Impact, Notched	2.00 J/cm ²	9.52 ft-lb/in ²	dry; ISO 179-1/1eA
Coefficient of Friction, Dynamic	0.35	0.35	
Sand Slurry	0.80	0.80	µm/km

Thermal Properties	Metric	English	Comments
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Thermal Properties <small>CTE, linear</small>	100 µm/m-°C Metric	95.9 µin/in-°F English	Comments
	@Temperature 23.0 - 60.0 °C	@Temperature 73.4 - 140 °F	
	120 µm/m-°C	66.7 µin/in-°F	
	@Temperature 23.0 - 100 °C	@Temperature 73.4 - 212 °F	
Thermal Conductivity	0.230 W/m-K	1.60 BTU-in/hr-ft ² -°F	
Melting Point	180 °C	356 °F	ISO 11357-1
Maximum Service Temperature, Air	120 °C	248 °F	
	@Time 1.80e+7 sec	@Time 5000 hour	
	150 °C	302 °F	
	@Time <=86400 sec	@Time <=24.0 hour	
Minimum Service Temperature, Air	-60.0 °C	-76.0 °F	
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	>= 1.00e+12 ohm-cm	>= 1.00e+12 ohm-cm	50% RH; IEC 60093
	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	dry; IEC 60093
Surface Resistance	>= 1.00e+12 ohm	>= 1.00e+12 ohm	50% RH; IEC 60093
	>= 1.00e+13 ohm	>= 1.00e+13 ohm	dry; IEC 60093
Dielectric Constant	3.5	3.5	dry; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	20.0 kV/mm	508 kV/in	50% RH; IEC 60243-1
	50.0 kV/mm	1270 kV/in	dry; IEC 60243-1
Dielectric Loss Index	0.038	0.038	dry; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	

Compliance Properties	Metric	English	Comments
FDA	Yes	Yes	

Descriptive Properties	Value	Comments
Color	Natural	

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