Murtfeldt Murlubric® [FS] Oil Modified Nylon 6

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

Material Notes:

Murlubric® is a modified cast polyamide that mineral oil is integrated into during polymerization. As a result, the material has self lubricating properties and retains its excellent characteristics for its entire lifetime.Special Properties:• Excellent slide properties• Wear-resistant, even in abrasive applications• High mechanical strength• Self-lubricating• Vibration-free running• Low residual stress• Good lubricant resistance• High dynamic load-bearing capacity• Approved for use in the food industry (EU and FDA)Information provided by Murtfeldt Kunststoffe GmbH & Co. KG.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Murtfeldt-Murlubric-FS-Oil-Modified-Nylon-6.php

Physical Properties	Metric	English	Comments
Density	1.14 g/cc	0.0412 lb/in³	ISO 1183-1
Moisture Absorption at Equilibrium	1.8 % @Temperature 23.0 °C	1.8 % @Temperature 73.4 °F	50% RH
Water Absorption at Saturation	5.5 % @Temperature 23.0 °C	5.5 % @Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	82	82	dry; ISO 2039-2
Ball Indentation Hardness	140 MPa	20300 psi	dry; ISO 2039-1
Tensile Strength	80.0 MPa	11600 psi	ISO 527-1
Elongation at Break	50 %	50 %	ISO 527-1
Creep Strength	18.0 MPa @Time 3.60e+6 sec	2610 psi @Time 1000 hour	stress leading to 1% elongation; dry; ISO 899-1
Modulus of Elasticity	2.50 GPa	363 ksi	
Compressive Yield Strength	22.0 MPa @Strain 1.00 %	3190 psi @Strain 1.00 %	dry; ISO 604
	43.0 MPa @Strain 2.00 %	6240 psi @Strain 2.00 %	dry; ISO 604
	79.0 MPa @Strain 5.00 %	11500 psi @Strain 5.00 %	dry; ISO 604
Charpy Impact Unnotched	NB	NB	dry; ISO 179-1/1eU

Mechanical Properties	Metric	English	Comments
Charpy Impact, Notched	>= 0.500 J/cm²	>= 2.38 ft-lb/in²	dry; ISO 179-1/1eA
Coefficient of Friction, Dynamic	0.18	0.18	
Sand Slurry	0.050	0.050	µm/km

Thermal Properties	Metric	English	Comments
CTE, linear	80.0 µm/m-°C @Temperature 23.0 - 60.0 °C	44.4 µin/in-°F @Temperature 73.4 - 140 °F	
	90.0 µm/m-°C @Temperature 23.0 - 100 °C	50.0 µin/in-°F @Temperature 73.4 - 212 °F	
Thermal Conductivity	0.230 W/m-K	1.60 BTU-in/hr-ft²-°F	
Melting Point	215 °C	419 °F	ISO 11357-1
Maximum Service Temperature, Air	90.0 °C @Time 7.20e+7 sec	194 °F @Time 20000 hour	
	105 °C @Time 1.80e+7 sec	221 °F @Time 5000 hour	
	160 °C @Time <=86400 sec	320 °F @Time <=24.0 hour	
Minimum Service Temperature, Air	-30.0 °C	-22.0 °F	
Glass Transition Temp, Tg	50.0 °C	122 °F	ISO 11357-1
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	>= 1.00e+14 ohm-cm	>= 1.00e+14 ohm-cm	dry; IEC 60093
Surface Resistance	>= 1.00e+13 ohm	>= 1.00e+13 ohm	dry; IEC 60093
Dielectric Constant	3.1 @Frequency 1.00e+6 Hz	3.1 @Frequency 1.00e+6 Hz	dry; IEC 60250
	3.5 @Frequency 100 Hz	3.5 @Frequency 100 Hz	dry; IEC 60250
Dielectric Strength	22.0 kV/mm	559 kV/in	dry; IEC 60243-1

Electrical Properties	Metric	English	Comments
Dielectric Loss Index	0.015	0.015	dry; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.016 @Frequency 1.00e+6 Hz	0.016 @Frequency 1.00e+6 Hz	dry; IEC 60250

Compliance Properties	Metric	English	Comments
FDA	Yes	Yes	

Descriptive Properties	Value	Comments
Color	Blue	

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