

Murfieldt Murylat® SP Polyethylene Terephthalate

Category : Polymer , Thermoplastic , Polyester, TP , Polyethylene Terephthalate (PET) , Polyethylene Terephthalate (PET), Unreinforced

Material Notes:

Murylat® SP combines the properties of Murylat® with improved wear and friction characteristics. It also has increased dynamic resilience which, for example, significantly reduces the required drive power for your plants. This is made possible by the homogeneous distribution of solid lubricant. Special Properties: • Increased wear resistance • Better slide properties • High creep strength – even at high temperatures • Very good dimensional stability • High dynamic load-bearing capacity • Low moisture absorption • Approved for use in the food industry (EU and FDA) Information provided by Murfieldt Kunststoffe GmbH & Co. KG.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Murfieldt-Murylat-SP-Polyethylene-Terephthalate.php

Physical Properties	Metric	English	Comments
Density	1.44 g/cc	0.0520 lb/in ³	ISO 1183-1
Moisture Absorption at Equilibrium	0.23 %	0.23 %	50% RH
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Water Absorption at Saturation	0.47 %	0.47 %	
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	94	94	ISO 2039-2
Hardness, Shore D	81	81	DIN 53505
Ball Indentation Hardness	160 MPa	23200 psi	ISO 2039-1
Tensile Strength, Yield	76.0 MPa	11000 psi	dry; ISO 527-1/-2
	76.0 MPa	11000 psi	50% RH; ISO 527-1/-2
Elongation at Break	5.0 %	5.0 %	dry; ISO 527-1/-2
	5.0 %	5.0 %	50% RH; ISO 527-1/-2
Creep Strength	23.0 MPa	3340 psi	stress leading to 1% elongation; dry; ISO 899-1
	23.0 MPa	3340 psi	stress leading to 1% elongation; 50% RH; ISO 899-1
Modulus of Elasticity	3.30 GPa	479 ksi	dry
	3.30 GPa	479 ksi	50% RH
Compressive Yield Strength	24.0 MPa	3480 psi	dry; ISO 604

Mechanical Properties	@Strain 1.00 % Metric	@Strain 1.00 % English	Comments
	47.0 MPa	6820 psi	dry; ISO 604
	@Strain 2.00 %	@Strain 2.00 %	
	95.0 MPa	13800 psi	dry; ISO 604
	@Strain 5.00 %	@Strain 5.00 %	
Charpy Impact Unnotched	3.00 J/cm ²	14.3 ft-lb/in ²	ISO 179-1/1eU
	>= 3.00 J/cm ²	>= 14.3 ft-lb/in ²	ISO 179
Charpy Impact, Notched	0.250 J/cm ²	1.19 ft-lb/in ²	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	65.0 µm/m-°C	36.1 µin/in-°F	
	@Temperature 23.0 - 60.0 °C	@Temperature 73.4 - 140 °F	
	85.0 µm/m-°C	47.2 µin/in-°F	
	@Temperature 23.0 - 100 °C	@Temperature 73.4 - 212 °F	
Melting Point	245 °C	473 °F	ISO 11357-1
Maximum Service Temperature, Air	100 °C	212 °F	
	@Time 7.20e+7 sec	@Time 20000 hour	
	115 °C	239 °F	
	@Time 1.80e+7 sec	@Time 5000 hour	
	160 °C	320 °F	
	@Time <=86400 sec	@Time <=24.0 hour	
Minimum Service Temperature, Air	-20.0 °C	-4.00 °F	
Glass Transition Temp, Tg	70.0 °C	158 °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
	>= 1.00e+14 ohm-cm	>= 1.00e+14 ohm-cm	50% RH; IEC 60093

Electrical Properties	Metric	English	Comments
	>= 1.00e+13 ohm	>= 1.00e+13 ohm	50% RH; IEC 60093
Dielectric Constant	3.2	3.2	dry; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.2	3.2	50% RH; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.4	3.4	dry; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	3.4	3.4	50% RH; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	21.0 kV/mm	533 kV/in	dry; IEC 60243-1
	21.0 kV/mm	533 kV/in	
Dielectric Loss Index	0.0010	0.0010	dry; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.0010	0.0010	50% RH; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.014	0.014	dry; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.014	0.014	50% RH; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Compliance Properties	Metric	English	Comments
European Food 1935/2004	Yes	Yes	
FDA	Yes	Yes	

Descriptive Properties	Value	Comments
Color	Light Grey	

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