

Schwartz Technical Plastics LAMIGAMIDÂ® 510 Polyethylene Terephthalate

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

Material Notes:

Application: friction bearings, wear liners
Information provided by Schwartz Technical Plastics GmbH

Order this product through the following link:

http://www.lookpolymers.com/polymer_Schwartz-Technical-Plastics-LAMIGAMID-510-Polyethylene-Terephthalate.php

Physical Properties	Metric	English	Comments
Density	1.37 g/cc	0.0495 lb/inÂ³	ISO R 1183
Moisture Absorption at Equilibrium	0.40 %	0.40 %	DIN 53473
Water Absorption at Saturation	0.60 % @Temperature 20.0 Â°C	0.60 % @Temperature 68.0 Â°F	ISO R 62

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	120 MPa	17400 psi	Hc 30; ISO 2039; partially
Tensile Strength, Yield	74.0 MPa	10700 psi	ISO-DIS 527
Creep Strength	27.0 MPa	3920 psi	1% elongation, 1000 h; DIN 53444
	>= 45.0 MPa	>= 6530 psi	2% elongation, 1000 h; DIN 53444
Flexural Strength	125 MPa	18100 psi	DIN 54352
Flexural Modulus	3.50 GPa	508 ksi	DIN 53457
Compressive Strength	56.0 MPa	8120 psi	5% pressing; EN ISO 604
	88.0 MPa	12800 psi	10% pressing; EN ISO 604
	95.0 MPa	13800 psi	20% pressing; EN ISO 604
Izod Impact, Notched (ISO)	>= 4.00 kJ/mÂ²	>= 1.90 ft-lb/inÂ²	DIN 53453
Izod Impact Resistance	NB	NB	swinging hammer 0,1 DIN 51222; DIN 53453
Coefficient of Friction	0.020 - 0.080	0.020 - 0.080	With lubrication
Coefficient of Friction, Dynamic	0.24 - 0.28	0.24 - 0.28	no lube; Steel 2162, Rvst=2E-6m, p=0.05 Mpa, v=0.6 m/s, t=40Â°C
Tear Strength Test	>= 0.50	>= 0.50	ISO-DIS 527
K Factor (Wear Factor)	1.5e-10	1.5e-10	

Thermal Properties	Metric	English	Comments
CTE, linear	80.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	44.4 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	DIN 53752
	@Temperature 20.0 - 100 $\text{Å}^\circ\text{C}$	@Temperature 68.0 - 212 $\text{Å}^\circ\text{F}$	
Specific Heat Capacity	1.05 J/g- $\text{Å}^\circ\text{C}$	0.251 BTU/lb- $\text{Å}^\circ\text{F}$	
Thermal Conductivity	0.210 W/m-K	1.46 BTU-in/hr-ft Å^2 - $\text{Å}^\circ\text{F}$	DIN 52612
Melting Point	255 $\text{Å}^\circ\text{C}$	491 $\text{Å}^\circ\text{F}$	ISO R 1218
Maximum Service Temperature, Air	100 $\text{Å}^\circ\text{C}$	212 $\text{Å}^\circ\text{F}$	Continuous
	180 $\text{Å}^\circ\text{C}$	356 $\text{Å}^\circ\text{F}$	Intermittent
Deflection Temperature at 1.8 MPa (264 psi)	74.0 $\text{Å}^\circ\text{C}$	165 $\text{Å}^\circ\text{F}$	V-notch; ISO R 75
Minimum Service Temperature, Air	-40.0 $\text{Å}^\circ\text{C}$	-40.0 $\text{Å}^\circ\text{F}$	Continuous

Electrical Properties	Metric	English	Comments
Volume Resistivity	4.00e+16 ohm-cm	4.00e+16 ohm-cm	DIN 53482
Surface Resistance	5.00e+12 ohm	5.00e+12 ohm	DIN 53482
Dielectric Constant	3.6	3.6	DIN 53483
Dielectric Strength	90.0 kV/mm	2290 kV/in	DIN 53481
Dielectric Loss Index	0.019	0.019	DIN 53483

Descriptive Properties	Value	Comments
Creepage/leakage Resistance	Ka2	DIN 53480

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