

Schwartz Technical Plastics LAMIGAMIDÂ® 319 Cast Polyamide 6, Oil Filled, Conditioned

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

Material Notes:

Application: sheaves and wheels without additional bearings, sliding liners
Information provided by Schwartz Technical Plastics GmbH

Order this product through the following link:

http://www.lookpolymers.com/polymer_Schwartz-Technical-Plastics-LAMIGAMID-319-Cast-Polyamide-6-Oil-Filled-Conditioned.php

Physical Properties	Metric	English	Comments
Density	1.15 g/cc	0.0415 lb/in ³	ISO R 1183
Moisture Absorption at Equilibrium	1.0 %	1.0 %	DIN 53473
Water Absorption at Saturation	4.0 % @Temperature 20.0 Â°C	4.0 % @Temperature 68.0 Â°F	ISO R 62

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	130 MPa	18900 psi	Hc 30; ISO 2039; partially
Tensile Strength, Yield	70.0 MPa	10200 psi	ISO-DIS 527
Creep Strength	>= 12.0 MPa	>= 1740 psi	1% elongation, 1000 h; DIN 53444
	>= 16.0 MPa	>= 2320 psi	2% elongation, 1000 h; DIN 53444
Tensile Modulus	2.80 GPa	406 ksi	DIN 53457
Flexural Strength	60.0 MPa	8700 psi	DIN 54352
Flexural Modulus	2.50 GPa	363 ksi	DIN 53457
Compressive Strength	21.0 MPa	3050 psi	5% pressing; EN ISO 604
	43.0 MPa	6240 psi	10% pressing; EN ISO 604
	66.0 MPa	9570 psi	20% pressing; EN ISO 604
Izod Impact, Notched (ISO)	>= 15.0 kJ/m ²	>= 7.14 ft-lb/in ²	ISO 180-1A
Izod Impact Resistance	NB	NB	swinging hammer 0,1 DIN 51222; DIN 53453
Coefficient of Friction	0.080	0.080	With lubrication
Coefficient of Friction, Dynamic	0.20	0.20	no lube; Steel 2162, Rvst=2E-6m, p=0.05 Mpa, v=0.6 m/s, t=40Â°C
Tear Strength Test	>= 0.25	>= 0.25	ISO-DIS 527

Mechanical Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear	70.0 - 80.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	38.9 - 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	1.67 J/g- $\text{Å}^\circ\text{C}$	0.399 BTU/lb- $\text{Å}^\circ\text{F}$	
Thermal Conductivity	0.250 W/m-K	1.74 BTU-in/hr-ft Å^2 - $\text{Å}^\circ\text{F}$	DIN 52612
Melting Point	220 $\text{Å}^\circ\text{C}$	428 $\text{Å}^\circ\text{F}$	ISO R 1218
Maximum Service Temperature, Air	120 $\text{Å}^\circ\text{C}$	248 $\text{Å}^\circ\text{F}$	Continuous
	180 $\text{Å}^\circ\text{C}$	356 $\text{Å}^\circ\text{F}$	Intermittent
Deflection Temperature at 0.46 MPa (66 psi)	210 $\text{Å}^\circ\text{C}$	410 $\text{Å}^\circ\text{F}$	V-notch; ISO R 75
Deflection Temperature at 1.8 MPa (264 psi)	120 $\text{Å}^\circ\text{C}$	248 $\text{Å}^\circ\text{F}$	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	1.00e+12 ohm-cm	1.00e+12 ohm-cm	DIN 53482
Surface Resistance	1.00e+10 ohm	1.00e+10 ohm	DIN 53482
Dielectric Constant	3.7	3.7	DIN 53483
Dielectric Strength	20.0 kV/mm	508 kV/in	DIN 53481
Dielectric Loss Index	0.030	0.030	DIN 53483

Descriptive Properties	Value	Comments
Creepage/leakage Resistance	KA3b	DIN 53480

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