

Schwartz Technical Plastics LAMIGAMIDÂ® 320 Cast Polyamide 6, Conditioned

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

Material Notes:

Application: heavy-duty wheels
Information provided by Schwartz Technical Plastics GmbH

Order this product through the following link:

http://www.lookpolymers.com/polymer_Schwartz-Technical-Plastics-LAMIGAMID-320-Cast-Polyamide-6-Conditioned.php

Physical Properties	Metric	English	Comments
Density	1.15 g/cc	0.0415 lb/inÂ³	ISO R 1183
Moisture Absorption at Equilibrium	2.2 %	2.2 %	DIN 53473
Water Absorption at Saturation	7.0 % @Temperature 20.0 Â°C	7.0 % @Temperature 68.0 Â°F	ISO R 62

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	150 MPa	21800 psi	Hc 30; ISO 2039; partially
Tensile Strength, Yield	80.0 MPa	11600 psi	ISO-DIS 527
Creep Strength	>= 6.00 MPa	>= 870 psi	1% elongation, 1000 h; DIN 53444
	>= 10.0 MPa	>= 1450 psi	2% elongation, 1000 h; DIN 53444
Tensile Modulus	3.00 GPa	435 ksi	DIN 53457
Flexural Strength	70.0 MPa	10200 psi	DIN 54352
Flexural Modulus	2.80 GPa	406 ksi	DIN 53457
Compressive Strength	56.0 MPa	8120 psi	5% pressing; EN ISO 604
	79.0 MPa	11500 psi	10% pressing; EN ISO 604
	108 MPa	15700 psi	20% pressing; EN ISO 604
Izod Impact, Notched (ISO)	>= 12.0 kJ/mÂ²	>= 5.71 ft-lb/inÂ²	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	0.35	0.35	no lube; Steel 2162, Rvst=2E-6m, p=0.05 Mpa, v=0.6 m/s, t=40Â°C
Tear Strength Test	>= 0.15	>= 0.15	ISO-DIS 527

K Factor (Wear Factor) Mechanical Properties	1.0e-10 Metric	1.0e-10 English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear	70.0 - 80.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature 20.0 - 100 $\text{Å}^\circ\text{C}$	38.9 - 44.4 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature 68.0 - 212 $\text{Å}^\circ\text{F}$	DIN 53752
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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