

Lehmann & Voss LUVOCOM[®] 50/CF/5/GF/10 Polycarbonate, with carbon fiber and glass fiber

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Carbon Fiber Reinforced

Material Notes:

Applications: Data processing machinery, precision engineering, film and photo industry, sporting and leisure goods, medical engineering. High-strength and high-stiff parts; low coefficient of expansion. Reduced moment of inertia compared with metal parts. Electrically conductive, suitable for continuous discharging of statically generated electricity. High dimensionally stable precision parts, even at elevated temperatures and narrow tolerance range. Body and duty parts in office equipment, gear wheels, grippers. Information provided by Lehmann & Voss & Co.KG

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lehmann-Voss-LUVOCOM-50CF5GF10-Polycarbonate-with-carbon-fiber-and-glass-fiber.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.29 g/cc	1.29 g/cc	ISO 1183
Water Absorption	<= 0.20 %	<= 0.20 %	23 [°] C/24h
Linear Mold Shrinkage	0.0030 - 0.0050 cm/cm	0.0030 - 0.0050 in/in	

Mechanical Properties	Metric	English	Comments
Tensile Stress	110 MPa	16000 psi	
Elongation at Yield	3.0 %	3.0 %	
	4.0 %	4.0 %	flexural
Modulus of Elasticity	7.00 GPa	1020 ksi	
Flexural Strength	180 MPa	26100 psi	
Flexural Modulus	6.00 GPa	870 ksi	
Charpy Impact Unnotched	4.00 J/cm ²	19.0 ft-lb/in ²	flatwise; ISO 179 1fU
	3.60 J/cm ²	17.1 ft-lb/in ²	ISO 179
	@Temperature -30.0 [°] C	@Temperature -22.0 [°] F	
Charpy Impact, Notched	0.900 J/cm ²	4.28 ft-lb/in ²	ISO 179 1eA
	0.800 J/cm ²	3.81 ft-lb/in ²	ISO 179 eA
	@Temperature -30.0 [°] C	@Temperature -22.0 [°] F	
Coefficient of Friction, Dynamic	0.26	0.26	

Coefficient of Friction, Static Mechanical Properties	0.23 Metric	0.23 English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear	40.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	22.2 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	DIN 53752
Thermal Conductivity	0.300 W/m-K	2.08 BTU-in/hr-ft $\text{Å}^2\cdot\text{Å}^\circ\text{F}$	DIN 52612
Maximum Service Temperature, Air	130 $\text{Å}^\circ\text{C}$	266 $\text{Å}^\circ\text{F}$	
	150 $\text{Å}^\circ\text{C}$	302 $\text{Å}^\circ\text{F}$	short term
Vicat Softening Point	160 $\text{Å}^\circ\text{C}$	320 $\text{Å}^\circ\text{F}$	DIN ISO 306

Electrical Properties	Metric	English	Comments
Surface Resistance	$\leq 1.00\text{e}+9$ ohm	$\leq 1.00\text{e}+9$ ohm	
Insulation Resistance	$\leq 1.00\text{e}+9$ ohm	$\leq 1.00\text{e}+9$ ohm	

Processing Properties	Metric	English	Comments
Processing Temperature	295 $\text{Å}^\circ\text{C}$	563 $\text{Å}^\circ\text{F}$	mass temp
Nozzle Temperature	290 - 310 $\text{Å}^\circ\text{C}$	554 - 590 $\text{Å}^\circ\text{F}$	
Zone 1	280 - 300 $\text{Å}^\circ\text{C}$	536 - 572 $\text{Å}^\circ\text{F}$	
Zone 2	290 - 310 $\text{Å}^\circ\text{C}$	554 - 590 $\text{Å}^\circ\text{F}$	
Zone 3	300 - 320 $\text{Å}^\circ\text{C}$	572 - 608 $\text{Å}^\circ\text{F}$	
Mold Temperature	80.0 - 120 $\text{Å}^\circ\text{C}$	176 - 248 $\text{Å}^\circ\text{F}$	
Drying Temperature	120 $\text{Å}^\circ\text{C}$ @Time 14400 - 21600 sec	248 $\text{Å}^\circ\text{F}$ @Time 4.00 - 6.00 hour	Dehumidifying dryer

Descriptive Properties	Value	Comments
Color	natural color (black)	

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