

Lehmann & Voss LUVOCOM[®] 50/CF/10/TF/15/BK 100 Polycarbonate, with carbon fiber and PTFE

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. Electrically conductive, suitable for continuous discharging of statically generated electricity. Improved friction and wear behaviour. Emergency running property. 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-50CF10TF15BK-100-Polycarbonate-with-carbon-fiber-and-PTFE.php

| Physical Properties | Metric | English | Comments |
|-----------------------|-----------------------|-----------------------|-----------|
| Specific Gravity | 1.34 g/cc | 1.34 g/cc | ISO 1183 |
| Water Absorption | <= 0.20 % | <= 0.20 % | 23Å°C/24h |
| Linear Mold Shrinkage | 0.0020 - 0.0040 cm/cm | 0.0020 - 0.0040 in/in | |
| Melt Flow | 15 - 20 g/10 min | 15 - 20 g/10 min | |

| Mechanical Properties | Metric | English | Comments |
|-------------------------|---------------------------|------------------------------|-----------------------|
| Tensile Stress | 100 MPa | 14500 psi | |
| Elongation at Yield | 2.5 % | 2.5 % | |
| | 3.0 % | 3.0 % | flexural |
| Modulus of Elasticity | 7.50 GPa | 1090 ksi | |
| Flexural Strength | 150 MPa | 21800 psi | |
| Flexural Modulus | 6.50 GPa | 943 ksi | |
| Charpy Impact Unnotched | 3.00 J/cm ^Å 2 | 14.3 ft-lb/in ^Å 2 | flatwise; ISO 179 1fU |
| | 2.50 J/cm ^Å 2 | 11.9 ft-lb/in ^Å 2 | ISO 179 |
| | @Temperature -30.0 Å°C | @Temperature -22.0 Å°F | |
| Charpy Impact, Notched | 1.20 J/cm ^Å 2 | 5.71 ft-lb/in ^Å 2 | ISO 179 1eA |
| | 0.900 J/cm ^Å 2 | 4.28 ft-lb/in ^Å 2 | ISO 179 eA |
| | @Temperature -30.0 Å°C | @Temperature -22.0 Å°F | |

| Coefficient of Friction, Dynamic Mechanical Properties | 0.18 Metric | 0.18 English | Comments |
|---|----------------|-----------------|----------|
| Coefficient of Friction, Static | 0.17 | 0.17 | |

| Thermal Properties | Metric | English | Comments |
|----------------------------------|--|---|-------------|
| CTE, linear | 35.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ | 19.4 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ | DIN 53752 |
| Thermal Conductivity | 0.400 W/m-K | 2.78 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 |
| Flammability, UL94 | V-0 | V-0 | |

| Electrical Properties | Metric | English | Comments |
|-----------------------|---------------------|---------------------|----------|
| Surface Resistance | $\leq 1\text{e}+05$ | $\leq 1\text{e}+05$ | |
| Insulation Resistance | ≤ 100000 ohm | ≤ 100000 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 | black | |

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