

Lehmann & Voss LUVOCOM[®] 1105-8513 PEEK, with carbon fiber

Category : Polymer , Thermoplastic , Polyketone , Polyetheretherketone (PEEK) , Polyetheretherketone, PEEK, Carbon Fiber Filled

Material Notes:

Applications: Automotive industry, textile machinery, medical- and precision engineering, aircraft industry.High-strength and high-stiff parts; low coefficient of expansion.Dynamic stressed parts at high movement velocity.Chemical and hydrolysis resistance parts, non flammable.Electrically conductive, suitable for continuous discharging of statically generated electricity.Bearings, sleeves, control disks, gear wheels, pump impellers, gear parts.Information provided by Lehmann & Voss & Co.KG

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lehmann-Voss-LUVOCOM-1105-8513-PEEK-with-carbon-fiber.php

| Physical Properties | Metric | English | Comments |
|-----------------------|------------------------|------------------------|-----------|
| Specific Gravity | 1.42 g/cc | 1.42 g/cc | ISO 1183 |
| Water Absorption | <= 0.10 % | <= 0.10 % | 23Å°C/24h |
| Linear Mold Shrinkage | 0.00050 - 0.0020 cm/cm | 0.00050 - 0.0020 in/in | |

| Mechanical Properties | Metric | English | Comments |
|----------------------------------|---------------------------|------------------------------|-----------------------|
| Tensile Stress | 245 MPa | 35500 psi | |
| Elongation at Yield | 1.6 % | 1.6 % | |
| | 2.1 % | 2.1 % | flexural |
| Modulus of Elasticity | 25.0 GPa | 3630 ksi | |
| Flexural Strength | 360 MPa | 52200 psi | |
| Flexural Modulus | 22.0 GPa | 3190 ksi | |
| Charpy Impact Unnotched | 2.50 J/cm ^Å 2 | 11.9 ft-lb/in ^Å 2 | flatwise; ISO 179 1fU |
| | 2.00 J/cm ^Å 2 | 9.52 ft-lb/in ^Å 2 | ISO 179 |
| | @Temperature -30.0 Å°C | @Temperature -22.0 Å°F | |
| Charpy Impact, Notched | 0.800 J/cm ^Å 2 | 3.81 ft-lb/in ^Å 2 | ISO 179 1eA |
| | 0.800 J/cm ^Å 2 | 3.81 ft-lb/in ^Å 2 | ISO 179 eA |
| | @Temperature -30.0 Å°C | @Temperature -22.0 Å°F | |
| Coefficient of Friction, Dynamic | 0.23 | 0.23 | |
| Coefficient of Friction, Static | 0.18 | 0.18 | |

| Thermal Properties | Metric | English | Comments |
|---|--|---|-------------|
| CTE, linear | 9.00 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ | 5.00 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ | DIN 53752 |
| Thermal Conductivity | 0.600 W/m-K | 4.16 BTU-in/hr-ft $\text{Å}^2\cdot\text{Å}^\circ\text{F}$ | DIN 52612 |
| Maximum Service Temperature, Air | 250 $\text{Å}^\circ\text{C}$ | 482 $\text{Å}^\circ\text{F}$ | |
| | 280 $\text{Å}^\circ\text{C}$ | 536 $\text{Å}^\circ\text{F}$ | short term |
| Deflection Temperature at 1.8 MPa (264 psi) | 260 $\text{Å}^\circ\text{C}$ | 500 $\text{Å}^\circ\text{F}$ | |
| Vicat Softening Point | 325 $\text{Å}^\circ\text{C}$ | 617 $\text{Å}^\circ\text{F}$ | DIN ISO 306 |

| Electrical Properties | Metric | English | Comments |
|-----------------------|-------------------|-------------------|----------|
| Surface Resistance | ≤ 10000 ohm | ≤ 10000 ohm | |
| Insulation Resistance | ≤ 100000 ohm | ≤ 100000 ohm | |

| Processing Properties | Metric | English | Comments |
|------------------------|---|--|---------------------|
| Processing Temperature | 390 $\text{Å}^\circ\text{C}$ | 734 $\text{Å}^\circ\text{F}$ | mass temp |
| Nozzle Temperature | 360 - 380 $\text{Å}^\circ\text{C}$ | 680 - 716 $\text{Å}^\circ\text{F}$ | |
| Zone 1 | 360 - 370 $\text{Å}^\circ\text{C}$ | 680 - 698 $\text{Å}^\circ\text{F}$ | |
| Zone 2 | 380 - 390 $\text{Å}^\circ\text{C}$ | 716 - 734 $\text{Å}^\circ\text{F}$ | |
| Zone 3 | 390 - 400 $\text{Å}^\circ\text{C}$ | 734 - 752 $\text{Å}^\circ\text{F}$ | |
| Mold Temperature | 170 - 200 $\text{Å}^\circ\text{C}$ | 338 - 392 $\text{Å}^\circ\text{F}$ | |
| Drying Temperature | 120 $\text{Å}^\circ\text{C}$ @Time 21600 - 28800 sec | 248 $\text{Å}^\circ\text{F}$ @Time 6.00 - 8.00 hour | or |
| | 150 $\text{Å}^\circ\text{C}$ @Time 10800 - 21600 sec | 302 $\text{Å}^\circ\text{F}$ @Time 3.00 - 6.00 hour | Dehumidifying dryer |

| Descriptive Properties | Value | Comments |
|------------------------|-------|----------|
| Color | black | |

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