

Hippe PEEK BG Polyetheretherketone with carbon fiber, PTFE and graphite

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

Material Notes:

The addition to PEEK of carbon fiber, PTFE and graphite results in a material with high mechanical strength, a low coefficient of sliding friction and enhanced resistance to abrasion. The outstanding tribological properties of PEEK BG make it a particularly suitable material for friction bearing applications. Information provided by Hippe.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hippe-PEEK-BG-Polyetheretherketone-with-carbon-fiber-PTFE-and-graphite.php

| Physical Properties | Metric | English | Comments |
|--------------------------------|-----------|-----------|------------|
| Specific Gravity | 1.47 g/cc | 1.47 g/cc | DIN 53 479 |
| Water Absorption at Saturation | 0.10 % | 0.10 % | DIN 53 495 |

| Mechanical Properties | Metric | English | Comments |
|----------------------------------|----------|----------|--|
| Elongation at Break | 3.0 % | 3.0 % | DIN 53 455 |
| Tensile Modulus | 10.0 GPa | 1450 ksi | DIN 53 457 |
| Flexural Modulus | 8.10 GPa | 1170 ksi | from bending test; DIN 53 457 |
| Coefficient of Friction, Dynamic | 0.11 | 0.11 | Against steel, p=0.05 N/mm ² , v=0.6 m/s, hardened and ground |
| Tear Strength Test | 118 | 118 | in MPa; DIN 53 455 |

| Thermal Properties | Metric | English | Comments |
|---|--------------|------------------------------------|---------------------|
| CTE, linear | 22.0 µm/m-°C | 12.2 µin/in-°F | |
| Thermal Conductivity | 0.240 W/m-K | 1.67 BTU-in/hr-ft ² -°F | |
| Melting Point | 334 °C | 633 °F | DIN 53 736 |
| Maximum Service Temperature, Air | 250 °C | 482 °F | Continuous use |
| | 300 °C | 572 °F | Short Periods |
| Deflection Temperature at 1.8 MPa (264 psi) | 277 °C | 531 °F | ISO-R 75 Method A |
| Glass Transition Temp, Tg | 143 °C | 289 °F | dynamic; DIN 53 736 |
| Flammability, UL94 | V-0 | V-0 | |

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

| Descriptive Properties | Value | Comments |
|-------------------------------|-----------|----------|
| Resistance to hot water, suds | resistant | |

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