

Quadrant EPP Ketron® PEEK-CLASSIX LSG

Material Notes:

KETRON® PEEK-CLASSIX LSG white stock shapes are produced from Invibio® PEEK-CLASSIX White resin. This material exhibits a unique combination of mechanical properties, temperature and chemical resistance. The composition of the Invibio PEEK-CLASSIX White resin complies with the regulations that apply in the Member States of the European Union (Directive 2002/72/EC, as amended) and in the United States of America (FDA) for plastic materials and articles intended to come into contact with foodstuffs. KETRON PEEK-CLASSIX LSG stock shapes have also been successfully type tested for their compliance with both United States Pharmacopeia (USP) and ISO 10993-1 guideline requirements for Biocompatibility Testing of Materials, and they come with full traceability from resin to stock shape. These features, added to an excellent sterilizability by means of steam, dry heat, ethylene oxide, plasma and gamma irradiation, make KETRON PEEK-CLASSIX LSG stock shapes very suitable for applications in the medical, pharmaceutical and biotechnology markets.

| Physical Properties | Metric | English | Comments |
|---|----------------|------------------------------------|-------------------------|
| Specific Gravity | 1.39 g/cc | 0.0502 lb/in ³ | ISO 1183 |
| Water Absorption | 0.05 % | 0.05 % | Immersion, 24hr; ISO 62 |
| Water Absorption at Saturation | 0.11 % | 0.11 % | Immersion, 96hr; ISO 62 |
| Mechanical Properties | | | |
| Hardness, Rockwell M | 105 | 105 | ISO 2039-2 |
| Tensile Strength, Ultimate | 115 MPa | 16675 psi | |
| Elongation at Break | 14 % | 14 % | ISO 527 |
| Tensile Modulus | 4.6 GPa | 667 ksi | ISO 527 |
| Flexural Yield Strength | 175 MPa | 25375 psi | ISO 178 |
| Compressive Strength | 143 MPa | 20735 psi | 5% Def.; ISO 604 |
| Electrical Properties | | | |
| Surface Resistivity per Square | Min 1e+013 ohm | Min 1e+013 ohm | IEC 60093 |
| Thermal Properties | | | |
| CTE, linear 68°F | 55.1 µm/m-°C | 30.6 µin/in-°F | (23°C to 150°C) |
| Thermal Conductivity | 0.249 W/m-K | 1.73 BTU-in/hr-ft ² -°F | |
| Melting Point | 340 °C | 644 °F | ISO 11357 |
| Maximum Service Temperature, Air | 250 °C | 482 °F | Long Term |
| Deflection Temperature at 1.8 MPa (264 psi) | 165 °C | 329 °F | |
| Flammability, UL94 (Estimated Rating) | V-0 | V-0 | 1.5 and 3 mm |

All statements, technical information and recommendations contained in this database are presented in good faith, based upon tests believed to be reliable and practical field experience. The reader is cautioned, however, that Quadrant EPP and Automation Creations, Inc. cannot guarantee the accuracy or completeness of this information, and it is the customer's responsibility to determine the suitability of Quadrant EPP's products in any given application.