

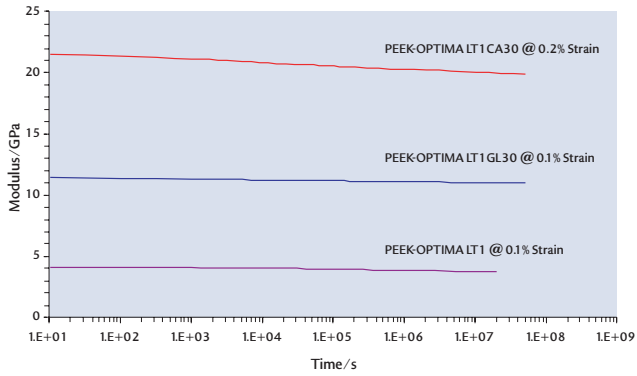
Typical Material Properties (Granular)

| Property | Method | Units | PEEK-OPTIMA® | |
|--|--|--------------------|--|------------|
| Density | ASTM D792 | g cm ⁻³ | 1.29 | |
| Tensile Strength (Yield) | ISO 527 Type 1B @ 50mm min ⁻¹ | ksi (MPa) | 14.5 (100) | |
| Tensile Elongation (Break) | ISO 527 Type 1B @ 50mm min ⁻¹ | % | 20 | |
| Flexural Modulus | ISO 178 | ksi (GPa) | 580 (4) | |
| Flexural Strength | ISO 178 | ksi (MPa) | 24.7 (170) | |
| Shear Strength | ASTM D3846 | ksi (MPa) | 7.7 (53) | |
| Shear Modulus | ASTM D3846 | ksi (GPa) | 188.5 (1.3) | |
| Compressive Strength | ASTM D695 | ksi (MPa) | 17.1 (118) | |
| Poisson's Ratio | ASTM D638 | N/A | 0.4 | |
| Rockwell Hardness | ASTM D785 | M scale | 99 | |
| Unnotched Izod Impact | ASTM D256 | ft-lb/in (J/m) | no break | |
| Notched Izod Impact | ASTM D256 | ft-lb/in (J/m) | 1.18 (63) | |
| Heat Distortion Temperature | ISO 75 | °F (°C) | 306 (152) | |
| Relative Thermal Index | UL 746 B | °F (°C) | 500 (260) | |
| 24-Hour Water Absorption | ISO 62 | Wt. % | 0.5 | |
| Coefficient of Thermal Expansion | Below T _g | ASTM D696 | 10 ⁻⁵ °F ⁻¹ (10 ⁻⁵ °C ⁻¹) | 2.6 (4.7) |
| | Above T _g | ASTM D696 | 10 ⁻⁵ °F ⁻¹ (10 ⁻⁵ °C ⁻¹) | 6.0 (10.8) |
| Melt Temperature | DSC | °F (°C) | 644 (340) | |
| Shrinkage LT1 (0.118 in (3mm) thick plaque, 170°C/338°F mold) | | | | |
| Flow | | % | 1.2 | |
| Color | | | Natural | |
| FDA DMF and MAF Available | | | Yes | |
| USP Class VI Certification | | | Yes | |
| ISO 10993 Data Available | | | Yes | |
| No Change Manufacturing Agreement | | | Yes | |
| Custom Reinforced Compounds Available | | | Yes | |
| Stock Shapes (Rod and Plate) Available | | | Yes | |

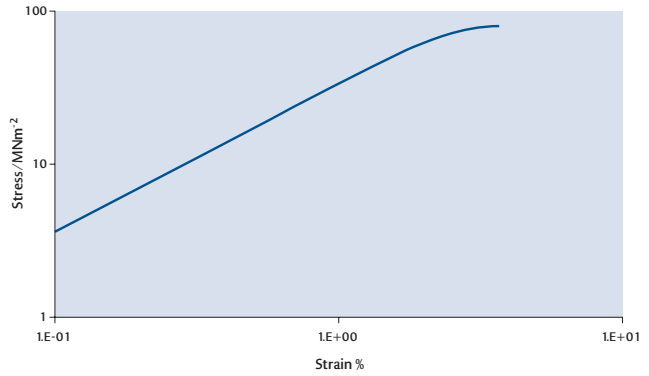
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Creep

Creep Modulus vs. Time for PEEK-OPTIMA and Compounds at 23 °C

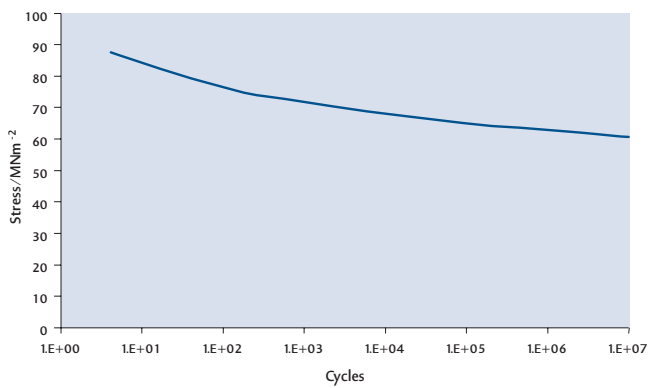


100s Isochronous Data PEEK-OPTIMA LT1 @ 23 °C

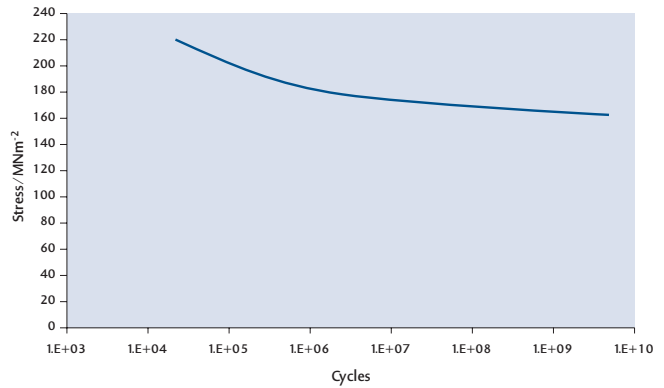


Fatigue

Tensile Fatigue for PEEK-OPTIMA LT1 at 23 °C 0.5Hz



Flex Fatigue for PEEK-OPTIMA LT1 CA30 23 °C 0.5 Hz



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