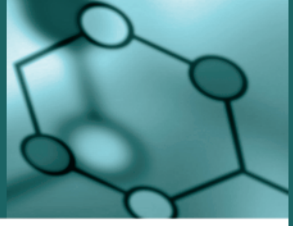
# Sulfone & Sulfide Polymers

PPS, PES



## VERTEC 7100™

**Compression Molded**

**VERTEC 7100** is a proprietary bearing grade PPS (polyphenylene sulfide) material. Lubricated with PTFE and graphite, it exhibits good tribological properties over a wide range of PV values and temperatures; thus it serves well as a bearing material. Due to the low ductility of PPS, use of this material for applications where high impact loads are present must be carefully examined.

| *Physical Properties* | *ASTM Method* | *Typical Values* | |
|---|---|---|---|
| Specific Gravity | D792 | 1.51 | $gr/cm^3$ |
| Water Absorption (24hrs. @73.4°F) | D570 | .02 | % |
| Color | N/A | Black | |
| | | | |
| *Mechanical Properties* | | | |
| Tensile Strength | D1708 | 7600 | psi |
| Tensile Elongation | D1708 | 3 | % |
| Flexural Strength | D790 | 19,100 | psi |
| Flexural Modulus | D790 | 78,000 | psi |
| Compressive Strength | D695 | 14,2000 | psi |
| Compressive Modulus | D695 | 23,000 | psi |
| Impact Strength (Izod, notched) | D256 | | ft-lb/in |
| Hardness | Shore D | 84 | |
| | | | |
| *Tribological Properties* | | | |
| Coefficient of Friction | | | |
| Static | D3702 | | |
| Dynamic | D3702 | .4 | |
| Wear Rate (PV: 20,000 psi-fpm) | D3702 | 16 | µin/min |
| | | | |
| *Thermal Properties* | | | |
| Coefficient of Linear Thermal Expansion (78 to 400°F) | D696 | 36 | $10^{-6}$/°F |
| Heat Deflection Temperature (@264 psi) | D648 | | °F |
| Glass Transition Temperature (Tg) | D3418 | | |
| Continuous Service Temperature (Max @ no load) | | | °F |
| Melting Point | | | °F |
| | | | |
| *Electrical Properties* | | | |
| Volume Resistivity | D257 | | $10^{16}$ ohm-cm |
| Dielectric Strength | D149 | | KV/mm |
| Dielectric Constant | D150 | | 50Hz, 200°C |

*Note: Property values should be interpreted as typical rather than minimum value.* All technical information and recommendations are presented in good faith, based upon laboratory and real-world tests believed to be reliable and practical. However, Vertec Polymers cannot guarantee the accuracy or completeness of this information, and it is the customer's responsibility to determine product suitability to any given application.
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