



## VERTEC IO3I

Compression Molded

VERTEC 1031™ is a bronze and molybdenum disulfide filled PTFE (polytetrafluoroethylene) material. Due to the higher thermal conductivity of bronze, this material dissipates heat substantially faster than unfilled PTFE. It thus exhibits excellent tribological properties at higher speeds in dynamic applications. Deformation under load is also improved due to the bronze content. Since some harsh chemicals attack bronze, use in corrosive environments must be carefully examined.

<i>Physical Properties</i>	<i>ASTM Method</i>	<i>Typical Values</i>
Specific Gravity	D792	3.85 gr/cm <sup>3</sup>
Water Absorption (24hrs. @73.4° F)	D570	.018 %
Color	N/A	Dark Brown

<i>Mechanical Properties</i>		
Tensile Strength	D1708	2100 psi
Tensile Elongation	D1708	130 %
Flexural Strength	D790	3500 psi
Flexural Modulus	D790	210,000 psi
Compressive Strength	D695	3200 psi
Compressive Modulus	D695	114,000 psi
Impact Strength (Izod, notched)	D256	ft-lb/in
Hardness	Shore D	68

<i>Tribological Properties</i>		
Coefficient of Friction		
Static	D3702	.07
Dynamic	D3702	0.12
Wear Rate (PV: 20,000 psi-fpm)	D3702	µin/min

<i>Thermal Properties</i>		
Coefficient of Linear Thermal Expansion (78 to 400° F)	D696	50 10 <sup>-6</sup> /°F
Heat Deflection Temperature (@264 psi)	D648	°F
Glass Transition Temperature (T <sub>g</sub> )	D3418	°F
Continuous Service Temperature (Max @ no load)		500 °F
Melting Point		621 °F

<i>Electrical Properties</i>		
Volume Resistivity	D257	10 <sup>16</sup> 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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