VERTEC 1023 is bronze filled PTFE (polytetrafluoroethylene). It provides better creep resistance than most of the PTFE alloys. It possesses high compressive strength and good wear and sliding properties. Most common applications include piston rings (compressors), bushes, bearings, and wear pads for high compression sliding applications. Certain chemicals may easily attack bronze.

| Physical Properties | ASTM Method | Typical Values |
|---|---|---|
| Specific Gravity | D792 | 3.88 gr/cm^3 |
| Water Absorption (24 hrs. @73.4° F) | D570 | 0.02 % |
| Color | N/A | Dark Brown |

| Mechanical Properties | ASTM Method | Typical Values |
|---|---|---|
| Tensile Strength | D1708 | 2000 psi |
| Tensile Elongation | D1708 | 100.0 % |
| Flexural Strength | D790 | 1750 psi |
| Flexural Modulus | D790 | 200000 psi |
| Compressive Strength | D695 | 1700 psi |
| Compressive Modulus | D695 | 118000 psi |
| Impact Strength (Izod, notched) | D256 | ft-lb/in |
| Hardness | Shore D | 65 |

| Tribological Properties | ASTM Method | Typical Values |
|---|---|---|
| Coefficient of Friction - Static | D3702 | 0.74 |
| Coefficient of Friction - Dynamic | D3702 | 0.7 |
| Wear Rate (PV: 20,000 psi-fpm) | D3702 | 0.7 µin/min |

| Thermal Properties | ASTM Method | Typical Values |
|---|---|---|
| Coefficient of Linear Thermal Expansion (78-400° F) | D696 | 53 10 -6/° F |
| Heat Deflection Temperature (@264 psi) | D648 | 175 ° F |
| Glass Transition Temperature (Tg) | D3418 | 266 ° F |
| Continuous Service Temperature (Max @ no load) | | 500 ° F |
| Melting Point | | 621 ° F |

| Electrical Properties | ASTM Method | Typical Values |
|---|---|---|
| Volume Resistivity | D257 | 10^5 ohm-cm |
| Dielectric Strength | D149 | KV/mm |
| Dielectric Constant | D150 | Hz, 200° C |