Technical Data Sheet

EVANTIC®

Performance Polymers | Engineered Components | Custom Solutions®

VERTEC™ 7501

Non-Lube Reciprocating Compressors Alloy

Product Description:

VERTEC™ 7501 is a lubricated, reinforced PTFE material. This material is specifically designed for rider bands, piston rings, and other wear components in non-lube, reciprocating compressors, operating in demanding environments.

Characteristics:

- High rigidity (PPS)
- Outstanding creep resistance
- Excellent flame resistance (PPS)
- Outstanding chemical resistance
- Outstanding hydrolytic stability (PES)

Physical Properties	ASTM Method	Typical Values
Specific Gravity, g/cm^3 (lb/ft^3)	D792	1.84 g/cm^3 (114.8 lb/ft^3)
Water Absorption 24 hrs @73.4° F (23°C)	D570	0.05 %
Color	N/A	Black

Mechanical Properties	ASTM Method	Typical Values
Tensile Strength	D1708	1,850 psi (12.7 MPa)
Tensile Elongation	D1708	4.0 %
Flexural Strength	D790	4,500 psi (31 MPa)
Flexural Modulus	D790	140,000 psi (965.2 MPa)
Compressive Strength	D695	3,200 psi (22.06 MPa)
Compressive Modulus	D695	110,000 psi (758.4 MPa)
Impact Strength (Izod, notched)	D256	
Hardness	Shore D	65

Tribological Properties	ASTM Method	Typical Values
Coefficient of Friction - Static	D3702	0.34
Coefficient of Friction - Dynamic	D3702	0.28
Wear Rate PV: 20,000 psi·fpm (137.9 MPa·m/s)	D3702	1.9 µin/min

Typical Applications:

- Surface mount connectors
- Chip trays
- Bushings and thrust washers
- Backup rings
- Powertrain components
- Electrical insulators
- Microwave components
- Pump vanes and gears
- Blower components
- Flowmeter impellers
- Electric heater grills
- Radomes
- Power tool components
- Pulp and paper machinery components

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Thermal Properties	ASTM Method	Typical Values
Coefficient of Linear Thermal Expansion (78-200°F / 25.6-204.4°C)	D696	55 x 10 -6/° F
Heat Deflection Temperature (@264 psi / 1.82 MPa)	D648	210 ° F (98.8° C)
Glass Transition Temperature (Tg)	D3418	266 ° F (130° C)
Continuous Service Temperature (Max @ no load)		480 ° F (248.9° C)
Melting Point		621 ° F (327.2° C)

Electrical Properties	ASTM Method	Typical Values
Volume Resistivity	D257	10^8 ohm-cm
Dielectric Strength	D149	
Dielectric Constant	D150	

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