Technical Data Sheet

EVANTIC®

Performance Polymers | Engineered Components | Custom Solutions®

VERTEC™ 7017

Glass / PTFE Filled PPS

Product Description:

VERTEC™ 7017 is glass and PTFE reinforced PPS (polyphenylene sulfide) material. It offers medium strength, high chemical resistance and good thermal and electrical insulation at elevated temperatures for use in many industrial applications.

Characteristics:

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

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

Physical Properties	ASTM Method	Typical Values
Specific Gravity, g/cm^3 (lb/ft^3)	D792	1.64/cm^3 (104.2 lb/ft^3)
Water Absorption 24 hrs @73.4° F (23°C)	D570	0.03 %
Color	N/A	Gray

Mechanical Properties	ASTM Method	Typical Values
Tensile Strength	D1708	10,500 psi (72.4 MPa)
Tensile Elongation	D1708	2.0%
Flexural Strength	D790	18,000 psi (124.1 MPa)
Flexural Modulus	D790	900,000 psi (6,205.3 MPa)
Compressive Strength	D695	15,000 psi (103.4 MPa)
Compressive Modulus	D695	1,000,000 (6,894.7 MPa)
Impact Strength (Izod, notched)	D256	0.9 ft-lb/in
Hardness	Shore D	86

Tribological Properties	ASTM Method	Typical Values
Coefficient of Friction - Static	D3702	0.35
Coefficient of Friction - Dynamic	D3702	0.8
Wear Rate PV: 20,000 psi·fpm (137.9 MPa·m/s)	D3702	2.1 µin/min

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Thermal Properties	ASTM Method	Typical Values
Coefficient of Linear Thermal Expansion (78-200°F / 25.6-204.4°C)	D696	20 x 10 -6/° F
Heat Deflection Temperature (@264 psi / 1.82 MPa)	D648	490 ° F (254.4 °C)
Glass Transition Temperature (Tg)	D3418	200 ° F (93.3 °C)
Continuous Service Temperature (Max @ no load)		430 ° F (221.1 °C)
Melting Point		540 ° F (282.2 °C)

Electrical Properties	ASTM Method	Typical Values
Volume Resistivity	D257	10 x 16 Ω-cm (3.94×1015 Ω-in)
Dielectric Strength	D149	kV/in
Dielectric Constant	D150	

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