ATSP Innovations

TECHNICAL DATA SHEET

AROMATIC THERMOSETTING POLYESTER (ATSP)

KEY CHARACTERISTICS:

- Extremely low friction
- Great wear properties and high toughness
- Good weathering resistance
- Excellent oxidative stability
- High glass transition and heat deflection temperature
- Non-flammable
- Very low moisture pickup and high moisture resistance
- Easy machinability

APPLICATIONS:

- Semiconductor machinery components
- Valve and fittings
- Bearings and bushings
- Aerospace parts
- Electrical components
- Seals
- Pump components

PROPERTIES:

Physical Properties	ATSP
Density (g/cm3)	1.35
Color	Opaque; Cream to tan

Electrical Properties	ATSP
Dielectric Constant	3.0
Dielectric Breakdown Strength (V/µm)	384

Mechanical Properties	ASTM Standard	ATSP
Tensile Strength (MPa)	D883	85.18 ± 6.48
Young's Modulus (GPa)	D883	3.04 ± 1.12
Ultimate Stain (%)	D883	2.65 ± 0.63
Compressive Strength (MPa)	D695	160
Flexural Strength (MPa)	D790	4.6 ± 0.53
Impact Strength (KJ/m^2)	D256	3.36
Hardness (Rockwell)		83 (Shore E)

Thermal Properties	ATSP
Glass Transition (°C)	240-285
Short-term Thermal Stability (°C)	425 (In Nitrogen) 350 (In Air)
Heat Capacity (J/g°C)	1.44 (at 25°C)
Thermal conductivity (W/m.K)	0.1
Coefficient of Thermal Expansion (1/K)	75×10^{-6}
Limiting Oxygen Index (LOI)	40%