

# FLUOROSINT® 500 (Filled PTFE)

## KEY FEATURES

- Low Coefficient of Thermal Expansion
- Greater Resistance to Deformation Under Load Compared to Unfilled PTFE
- Very Low Coefficient of Friction
- Good Chemical Resistance

## DESCRIPTION

FLUOROSINT® 500 is an enhanced PTFE produced by Quadrant Plastics. Fluorosint® 500 has 9 times greater resistance to deformation under load than unfilled PTFE. Its coefficient of linear thermal expansion is 1/5 that of virgin PTFE. Fluorosint® 500 is harder than virgin PTFE, has better wear characteristics and maintains low frictional properties. There are several other versions of Fluorosint® that are FDA compliant (207) as well as bearing grades.

## TYPICAL PROPERTY VALUES

	Properties	Condition	Units	Value	ASTM Test
<b>Physical</b>	Chemical Designation			PTFE	
	Filler			Mica	
	Density		g/cm <sup>3</sup>	2.32	D792
<b>Mechanical</b>	Tensile Modulus	@ 73 °F	PSI	300,000	D638
	Tensile Strength	@ 73 °F	PSI	1,100	D638
	Tensile Elongation @ Brk	@ 73 °F	%	30	D638
	Flexural Modulus	@ 73 °F	PSI	500,000	D790
	Flexural Strength	@ 73 °F	PSI	2,200	D790
	Compressive Modulus	@ 73 °F	PSI	250,000	D695
	Compressive Strength	@ 73 °F, 10% strain	PSI	4,000	D695
	Izod (charpy) Impact Strength	@ 73 °F	ft-lbs/in	0.9	D256
	Hardness, Shore D	@ 73 °F		D70	D785
	Deformation Under Load	@2,000 PSI, 122°F	%	1.1	
	Coefficient of Friction	Dynamic		0.15	QTM55007
	Limiting PV		psi-ft/min	8,000	QTM55007
	Wear Factor		in <sup>3</sup> -min/ft-lb-hr	600	QTM55010

### TYPICAL PROPERTY VALUES

	Properties	Condition	Units	Value	ASTM Test
<b>Thermal</b>	Vicat Softening Point		°F		
	Melting Temperature		°F	621	D3418
	Heat Deflection Temperature	@ 264	°F	270	D648
	Service Temperature	Continuous	°F	500	
	Thermal Expansion (CLTE)		in/in/°F	2.5x10 <sup>-5</sup>	E-831
	Specific Heat		BTU/lb-°F		
	Thermal Conductivity		BTU-in/ft <sup>2</sup> -hr-°F	5.3	F433
<b>Electrical</b>	Surface Resistivity		ohms/square	>10 <sup>13</sup>	EOS/ESD S11.11
	Volume Resistivity		ohm-cm		
	Dielectric Strength		V/mil	275	D149
	Dielectric Constant	@10 <sup>6</sup> Hz		2.85	D150
	Dissipation Factor	@10 <sup>6</sup> Hz		0.008	D150
<b>Other</b>	Moisture Absorption	@ 24 hrs, 73 °F	%	0.1	D570
	Moisture Absorption	@ Saturation, 73 °F	%	3	D570
	Flammability	@3.1mm		V-O	UL94
	Food Grade			N	
	Relative Cost			\$\$	

\*The data stated above are typical values intended for reference and comparison purposes only.

\*The data should not be used as a basis for design specifications or quality control.

\*The information is provided as a guide to the best of our knowledge and given without obligation or liability.

\*Testing under individual application circumstances is recommended.