



MANUFACTURING CORPORATION

- Plastics Machining
- Spring Energized Seals
- Rotary Lip Seals

Material Data Sheet

Material: Fluorosint® 207

Polytetrafluoroethylene

Fluorosint's unique properties are the result of a proprietary process in which synthetically manufactured mica is chemically linked to PTFE. This bonding results in properties not normally attainable in reinforced PTFE. Fluorosint grades offer an excellent combination of low frictional properties and dimensional stability. Fluorosint® 207's unmatched dimensional stability, excellent creep resistance and white color uniquely position this material to serve FDA regulated applications. It is non-permeable in steam and complies with the FDA's regulation 21 CFR 175.300. Its relative wear rate is 1/20 the rate of PTFE below 300°F (150°C) making it an excellent choice for aggressive service bearings and bushing

Mechanical Properties	Test Method ASTM	Value	Units
Specific Gravity, 73°F	D792	2.3	
Tensile Strength, 73°F	D638	1,500	psi
Tensile Modulus of Elasticity, °F	D638	250,000	psi
Tensile Elongation (at break), 73°F	D638	50	%
Flexural Strength, 73°F	D790	2,000	psi
Flexural Modulus of Elasticity, 73°F	D790	350,000	psi
Shear Strength, 73°F	D732	1,700	psi
Compressive Strength, 10% Deformation, 73°F	D695	3,800	psi
Compressive Modulus of Elasticity, 73°F	D695	225,000	psi
Hardness, Rockwell, Scale as noted, 73°F	D785	R50	
Hardness, Durometer, Shore "D" Scale, 73°F	D2240	D65	
Izod Impact (notched), 73°F	D256 Type A	1	ft-lb/in of notch
Coefficient of Friction (Dry vs. Steel) Dynamic	QTM 55007	0.1	
Limiting PV (with 4:1 safety factor applied)	QTM 55007	8,000	ft.lbs./in. ² min
Wear Factor "k" x 10 ⁻¹⁰	QTM 55010	30	in. ³ -min/ft.lbs.hr
Thermal Properties			
Coefficient of Linear Thermal Expansion (-40°F to 300°F)	E-831 (TMA)	5.7 x 10 ⁻⁵	in/in./°F
Heat Deflection Temperature 264 psi	D648	210	°F
TG-Glass transition (amorphous)	D3418	N/A	°F
Melting Point (Crystalline) peak	D3418	621	°F
Continuous Service Temperature in Air (Max.) (1)		500	°F
Thermal Conductivity	F433		BTU-in/hr-ft ² -°F
Electrical Properties			
Dielectric Strength, Short Term	D149	200	Volts/mil
Surface Resistivity	EOS/ESD S11.11	>10 ¹²	ohm/square
Dielectric Constant, 106 Hz	D150	2.65	
Dissipation Factor, 106 Hz	D150	0.008	
Flammability @ 3.1 mm (1/8 in.)	UL 94	V-0	
FDA Compliant		Yes	

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*The values shown in these and the following charts are typical, average properties. Actual values may differ due to variations in resin formulations and processing methods. These values are obtained from sources believed to be reliable, including the resin manufactures, converters and other published sources. However, they should not be used for specification or design purposes. Above information is provided by Quadrant EPP.