Fluorosint 207 (Quadrant)

PTFE, synthetic mica-filled, FDA compliant, compression molded

Physical Properties	Metric	English	Comments
Specific Gravity	2.3 g/cc	0.0831 lb/in³	ASTM D792
Water Absorption	0.03 %	0.03 %	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	0.2 %	0.2 %	Immersion; ASTM D570 (2)
Deformation	1.1 %	1.1 %	2000 psi; 122°F (50° C)
Mechanical Properties			
Hardness, Rockwell R	50	50	ASTM D785
Hardness, Shore D	65	65	ASTM D2240
Tensile Strength, Ultimate	10.3 MPa	1500 psi	ASTM D638
Elongation at Break	50 %	50 %	ASTM D638
Tensile Modulus	1.72 GPa	250 ksi	ASTM D638
Flexural Modulus	2.41 GPa	350 ksi	ASTM D790
Flexural Yield Strength	13.8 MPa	2000 psi	ASTM D790
Compressive Strength	26.2 MPa	3800 psi	10% Def.; ASTM D695
Compressive Modulus	1.55 GPa	225 ksi	ASTM D695
Shear Strength	11.7 MPa	1700 psi	ASTM D732
Coefficient of Friction	0.1	0.1	Dry vs. Steel; QTM55007
K (wear) Factor	60.4 x 10^{-8} mm³/N-M	30 x 10^{-10} in³-min/ft-lb-hr	QTM 55010
Limiting Pressure Velocity	0.28 MPa-m/sec	8000 psi-ft/min	4:1 safety factor; QTM 55007
Izod Impact, Notched	0.534 J/cm	1 ft-lb/in	ASTM D256 Type A
Electrical Properties			
Surface Resistivity per Square	Min 1e+012 ohm	Min 1e+012 ohm	EOS/ESD S11.11
Dielectric Constant	2.65	2.65	1MHz; ASTM D150
Dielectric Strength	7.87 kV/mm	200 V/mil	Short Term; ASTM D149
Dissipation Factor	0.008	0.008	1MHz; ASTM D150
Thermal Properties			
CTE, linear 68°F	103 µm/m-°C	57 µin/in-°F	(-40°F to 300°F); ASTM E831
Melting Point	327 °C	621 °F	Crystalline, Peak; ASTM D3418
Maximum Service Temperature, Air	260 °C	500 °F	Long Term
Deflection Temperature at 1.8 MPa (264 psi)	98.9 °C	210 °F	ASTM D648
Flammability, UL94 (Estimated Rating)	V-0	V-0	1/8 inch
Qualitative Processing Properties			
Compliance - FDA	Compliant		
Machinability	2		1-10, 1=Easier to Machine
Service in Alcohols	Acceptable		
Service in Aliphatic Hydrocarbons	Acceptable		
Service in Aromatic Hydrocarbons	Acceptable		
Service in Chlorinated Solvents	Acceptable		
Service in Ethers	Acceptable		
Service in Ketones	Acceptable		
Service in Strong Acids	Acceptable		
Service in Strong Alkalies	Unacceptable		
Service in Sunlight	Acceptable		
Service in Weak Acids	Acceptable		
Service in Weak Alkalies	Acceptable		