TECHNICAL DATA SHEET
Fluorosint® (PTFE)

(PolyTetraFluoroEthylene)

Fluorosint ® is a proprietary mixture in which synthetically manufactured mica is chemically linked to PolyTetraFluoroEthylene (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.

Flurosint ® offers superior chemical resistance and continuous use temperature of 500°F (260 °C). Compared with PTFE, it has higher load carrying capability, 1/9 of the deformation under load, and a lower coefficient of thermal expansion. Fluorosint® material has been developed to excel in specific bearing and seal applications. Flurosint® possess the chemical resistance and compliance of PTFE, but with the addition of mical offers some special benefits that give the designer clear performance advantages.

TYPICAL PROPERTIES of FLUOROSINT® MICA-FILLED PTFE MATERIALS

ASTM or UL test	Property	Fluorosint® 500	Fluorosint® 207 (FDA)	Fluorosint® HPV (FDA)	Fluorosint® MT-01
	PHYSICAL				
D792	Density (lb/in³) (g/cm³)	0.084 2.32	0.083 2.30	0.074 2.06	0.082 2.27
D570	Water Absorption, 24 hrs (%)	0.10	0.03	0.15	0.10
D570	Water Absorption, Saturation (%)	3.0	0.20	0.43	-
	MECHANICAL				
D638	Tensile Strength (psi)	1,100	1,500	1,450	2,100
D638	Tensile Modulus (psi)	300,000	250,000	210,000	326,000
D638	Tensile Elongation at Break (%)	10	50	90	40
D790	Flexural Strength (psi)	2,200	2,000	2,500	4,000
D790	Flexural Modulus (psi)	500,000	350,000	165,000	488,000
D732	Shear Strength (psi)	2,100	1,700	2,500	2,600
D695	Compressive Strength (psi)	4,000	3,800	3,000	3,400
D695	Compressive Modulus (psi)	250,000	225,000	110,000	250,000
-	Deformation Under Load (% @ 2000psi @ 122°F)	5.0	1.1	3.2	0.2
D785	Hardness, Rockwell R	R55	R50	R44	R74
D2240	Hardness, Shore D	D70	D65	D64	D75
D256, Type "A"	IZOD Notched Impact (ft-lb/in)	0.9	1.0	1.8	0.8
QTM55007	Coefficient of Friction (dry vs steel dynamic)	0.15	0.1	0.15	0.18
QTM55007	Limiting PV (4:1 safety factor)	8,000	8,000	20,000	4,500
QTM55007	Wear Factor "k" x 10^{-10}	600	30	38	200
	THERMAL				
E-831 (TMA)	Coefficient of Linear Thermal Expansion (x 10^{-5} in./in./°F)	2.5	5.7	4.9	3.0
D648	Heat Deflection Temp (°F / °C) at 264 psi	270 / 132	210 / 99	180 / 82	200 / 93
D3418	Melting Temp (°F / °C)	621 / 327	621 / 327	621 / 327	- -
-	Max Continuous Service Temp (°F / °C)	500 / 260	500 / 260	500 / 260	600 / 315
F433	Thermal Conductivity (BTU-in/ft²-hr-°F) (x 10^{-4} cal/cm-sec-°C)	5.30 18.3	- -	- -	- -
UL94	Flammability Rating	V-0	V-0	V-0	V-0
	ELECTRICAL				
D149	Dielectric Strength (V/mil) short time, 1/8" thick	275	200	-	-
D150	Dielectric Constant at 1 MHz	2.85	2.65	-	-
D150	Dissipation Factor at 1 MHz	0.008	0.008	-	-
EOS/ESD S 11.11	Surface Resistivity (ohms per square)	> 10^{13}	> 10^{12}	> 10^{13}	> 10^{5}

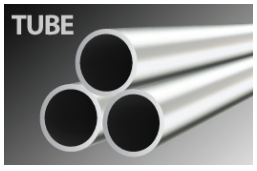
Benefits

Dimensional stability
Chemical resistance
High temp up to 500° F
Higher load-carrying capability
Resistance to deformation
Low coefficient of thermal expansion

Applications

Seals
Shrouds
Arm bearings
Automotive ring seals
Valve seats
Slide bearings
Wear straps
Thrust washers

SHAPES AVAILABLE



*Flurosint is a registered trademark of Quadrant EPP

NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets. All values at 73°F (23°C) unless otherwise noted.