



# LEHIGH VALLEY PLASTICS

We Shape The Industry

## Fluorosint® 500 (CM), PTFE, synthetic mica-filled, compression molded

MECHANICAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Specific Gravity	2.32	ASTM D792	2.32
Tensile Strength, psi	1100	ASTM D638	7.6 MPa
Tensile Modulus, psi	300000	ASTM D638	2,069 MPa
Elongation, %	10	ASTM D638	10 %
Flexural Strength, psi	2200	ASTM D790	15 MPa
Flexural Modulus, psi	500000	ASTM D790	3,448 MPa
Shear Strength, psi	2100	ASTM D732	14 MPa
Compressive Strength, psi	4000	ASTM D695, 10% Def.	28 MPa
Compressive Modulus, psi	250000	ASTM D695	1,724 MPa
Hardness, Rockwell R	55	ASTM D785	55
Hardness, Durometer, Shore D Scale	70	ASTM D2240	70
Izod Impact (Notched), ft-lb/in	0.9	ASTM D256 Type A	48 J/m
Coefficient of Friction, Dynamic	0.15	Dry vs. Steel, QTM55007	0.15
Limiting PV, psi-fpm	8000	4:1 safety factor; QTM 55007	0.28 MPa-m/sec
k (wear) factor, 10 <sup>-10</sup> in <sup>3</sup> -min/lb-ft-hr	600	QTM 55010	600 10 <sup>-10</sup> in <sup>3</sup> -min/lb-ft-hr
Relative Machinability	2	1-10, 1=Easier to Machine	2
THERMAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Coefficient of Thermal Expansion, 10E-4/°F	0.25	ASTM E831 (-40°F to 300°F)	0.45 10 <sup>-4</sup> /K
Deflection Temperature 264 psi, °F	270	ASTM D648	132 °C
Melting Point (Crystalline) Peak, °F	621	ASTM D3418	327 °C
Continuous Service in Air (Max), °F	500	Long Term	260 °C
Thermal Conductivity, BTU-in/hr-ft <sup>2</sup> -°F	5.3	ASTM F433	0.76 W/m-K
ELECTRICAL PROPERTIES	VALUES	COMMENTS	METRIC VALUES
Dielectric Strength, Short Term, Volts/mil	275	ASTM D149	11 kV/mm
Surface Resistance, Ohm/Square	1E+13	Lower Limit; EOS/ESD S11.111E+13 Ohm/Square	
Dielectric Constant, 1 MHz	2.85	ASTM D150	2.85
Dissipation Factor, 1 MHz	0.008	ASTM D150	0.008
CHEMICAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Water Absorption Immersion, 24 hr., %	0.1	ASTM D570(2)	0.1 %
Water Absorption Immersion Sat, %	3	ASTM D570(2)	3 %
Acids, Weak (acetic, dilute HCl)	3	Acceptable Service	3
Acids, Strong (conc. HCl or sulfuric)	3	Acceptable Service	3
Alkalies, Weak (dilute NaOH)	3	Acceptable Service	3
Alkalies, Strong (conc. NaOH)	1	Unacceptable	1
Hydrocarbons, Aromatic (toluene)	3	Acceptable Service	3
Hydrocarbons, Aliphatic (gasoline)	3	Acceptable Service	3
Ketones, Esters (acetone)	3	Acceptable Service	3
Ethers (diethyl ether, THF)	3	Acceptable Service	3
Chlorinated Solvents (methylene chloride)	3	Acceptable Service	3
Alcohols (methanol, anti-freeze)	3	Acceptable Service	3
Continuous Sunlight	3	Acceptable Service	3
COMPLIANCE	ENGLISH VALUES	COMMENTS	METRIC VALUES
Flammability, UL94 (5=V-0; 4=V-1; 3=V-2; 1=HB)5 (V-0)		UL94; 1/8 inch	5
FDA (1=Yes)	0	Not Compliant	0

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