



LEHIGH VALLEY PLASTICS

We Shape The Industry

Delrin® AF Blend, Acetal homopolymer, PTFE-filled, extruded

MECHANICAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Specific Gravity	1.5	ASTM D792	1.5
Tensile Strength, psi	8000	ASTM D638	55 MPa
Tensile Modulus, psi	435000	ASTM D638	2,999 MPa
Elongation, %	15	ASTM D638	15 %
Flexural Strength, psi	12000	ASTM D790	83 MPa
Flexural Modulus, psi	445000	ASTM D790	3,068 MPa
Shear Strength, psi	7600	ASTM D732	52 MPa
Compressive Strength, psi	16000	ASTM D695, 10% Def.	110 MPa
Compressive Modulus, psi	350000	ASTM D695	2,413 MPa
Hardness, Rockwell M	85	ASTM D785	85
Hardness, Rockwell R	115	ASTM D785	115
Hardness, Durometer, Shore D Scale	83	ASTM D2240	83
Izod Impact (Notched), ft-lb/in	0.7	ASTM D256 Type A	37 J/m
Coefficient of Friction, Dynamic	0.19	Dry vs. Steel, QTM55007	0.19
Limiting PV, psi-fpm	8300	4:1 safety factor; QTM 55007	0.29 MPa-m/sec
k (wear) factor, 10 ⁻¹⁰ in ³ -min/lb-ft-hr	60	QTM 55010	60 10 ⁻¹⁰ in ³ -min/lb-ft-hr
Relative Machinability	1	1-10, 1=Easier to Machine	1
THERMAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Coefficient of Thermal Expansion, 10E-4/°F	0.5	ASTM E831 (-40°F to 300°F)	0.90 10 ⁻⁴ /K
Deflection Temperature 264 psi, °F	244	ASTM D648	118 °C
Melting Point (Crystalline) Peak, °F	347	ASTM D3418	175 °C
Continuous Service in Air (Max), °F	180	Long Term	82 °C
ELECTRICAL PROPERTIES	VALUES	COMMENTS	METRIC VALUES
Dielectric Strength, Short Term, Volts/mil	400	ASTM D149	16 kV/mm
Surface Resistance, Ohm/Square	1E+13	Lower Limit; EOS/ESD S11.111	E+13 Ohm/Square
Dielectric Constant, 1 MHz	3.1	ASTM D150	3.1
Dissipation Factor, 1 MHz	0.01	ASTM D150	0.01
CHEMICAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Water Absorption Immersion, 24 hr., %	0.2	ASTM D570(2)	0.2 %
Water Absorption Immersion Sat, %	1	ASTM D570(2)	1 %
Acids, Weak (acetic, dilute HCl)	2	Limited Service	2
Acids, Strong (conc. HCl or sulfuric)	1	Unacceptable	1
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)	2	Limited Service	2
Alcohols (methanol, anti-freeze)	3	Acceptable Service	3
Continuous Sunlight	2	Limited Service	2
COMPLIANCE	ENGLISH VALUES	COMMENTS	METRIC VALUES
Flammability, UL94 (5=V-0; 4=V-1; 3=V-2; 1=HB)	1 (HB)	UL94; 1/8 inch	1
FDA (1=Yes)	0	Not Compliant	0

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