



LEHIGH VALLEY PLASTICS

We Shape The Industry

Nylatron® GS Nylon, Type 66, MoS2 filled, extruded

MECHANICAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Specific Gravity	1.16	ASTM D792	1.16
Tensile Strength, psi	12500	ASTM D638	86 MPa
Tensile Modulus, psi	480000	ASTM D638	3,310 MPa
Elongation, %	25	ASTM D638	25 %
Flexural Strength, psi	17000	ASTM D790	117 MPa
Flexural Modulus, psi	460000	ASTM D790	3,172 MPa
Shear Strength, psi	10500	ASTM D732	72 MPa
Compressive Strength, psi	16000	ASTM D695, 10% Def.	110 MPa
Compressive Modulus, psi	420000	ASTM D695	2,896 MPa
Hardness, Rockwell M	85	ASTM D785	85
Hardness, Rockwell R	115	ASTM D785	115
Hardness, Durometer, Shore D Scale	85	ASTM D2240	85
Izod Impact (Notched), ft-lb/in	0.5	ASTM D256 Type A	27 J/m
Coefficient of Friction, Dynamic	0.2	Dry vs. Steel, QTM55007	0.2
Limiting PV, psi-fpm	3000	4:1 safety factor; QTM 55007	0.11 MPa-m/sec
k (wear) factor, 10 ⁻¹⁰ in ³ -min/lb-ft-hr	90	QTM 55010	90 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	0.4	ASTM E831 (-40°F to 300°F)	0.72 10 ⁻⁴ /K
Deflection Temperature 264 psi, °F	200	ASTM D648	93 °C
Melting Point (Crystalline) Peak, °F	500	ASTM D3418	260 °C
Continuous Service in Air (Max), °F	220	Long Term	104 °C
Thermal Conductivity, BTU-in/hr-ft ² -°F	1.7	ASTM F433	0.24 W/m-K
ELECTRICAL PROPERTIES	VALUES	COMMENTS	METRIC VALUES
Dielectric Strength, Short Term, Volts/mil	350	ASTM D149	14 kV/mm
Surface Resistance, Ohm/Square	1E+13	Lower Limit; EOS/ESD S11.111	E+13 Ohm/Square
CHEMICAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Water Absorption Immersion, 24 hr., %	0.3	ASTM D570(2)	0.3 %
Water Absorption Immersion Sat, %	7	ASTM D570(2)	7 %
Acids, Weak (acetic, dilute HCl)	2	Limited Service	2
Acids, Strong (conc. HCl or sulfuric)	1	Unacceptable	1
Alkalies, Weak (dilute NaOH)	2	Limited Service	2
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)	2	Limited Service	2
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)	3 (V-2)	UL94; 1/8 inch	3
FDA (1=Yes)	0	Not Compliant	0

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