



LEHIGH VALLEY PLASTICS

We Shape The Industry

Nylatron® NSM Nylon, Type 6, solid lubricant filled, cast

MECHANICAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Specific Gravity	1.15	ASTM D792	1.15
Tensile Strength, psi	11000	ASTM D638	76 MPa
Tensile Modulus, psi	410000	ASTM D638	2,827 MPa
Elongation, %	20	ASTM D638	20 %
Flexural Strength, psi	16000	ASTM D790	110 MPa
Flexural Modulus, psi	475000	ASTM D790	3,275 MPa
Shear Strength, psi	10000	ASTM D732	69 MPa
Compressive Strength, psi	14000	ASTM D695, 10% Def.	97 MPa
Compressive Modulus, psi	400000	ASTM D695	2,758 MPa
Hardness, Rockwell M	80	ASTM D785	80
Hardness, Rockwell R	110	ASTM D785	110
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	0.18	Dry vs. Steel, QTM55007	0.18
Limiting PV, psi-fpm	15000	4:1 safety factor; QTM 55007	0.53 MPa-m/sec
k (wear) factor, 10 ⁻¹⁰ in ³ -min/lb-ft-hr	12	QTM 55010	12 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	0.55	ASTM E831 (-40°F to 300°F)	0.99 10 ⁻⁴ /K
Deflection Temperature 264 psi, °F	200	ASTM D648	93 °C
Melting Point (Crystalline) Peak, °F	420	ASTM D3418	216 °C
Continuous Service in Air (Max), °F	200	Long Term	93 °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	1E+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)	1 (HB)	UL94; 1/8 inch	1
FDA (1=Yes)	0	Not Compliant	0

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