

Material Data Sheet

Item: Nylon

Description: A widely used plastic with high wear and abrasion resistance, low coefficient of friction, good resilience and impact resistance. Nylon is non-abrasive to most materials; has noise dampening characteristics, good electrical insulating properties, and resistance to alkalies and organic chemicals.

Nylatron GS contains molybdenum disulfide solid lubricant dispersed throughout the Nylon providing extra lucidity for wear resistance, lower surface friction, higher heat resistance, and greater rigidity than standard Nylon. Applications include bearings, bushings, valve seats, rollers, gears, sleeves and forming dies.

Availability: Many thermoplastics are available in a multitude of forms such as sheets, rods, and tubes.

Fabrication: The Gund Company can fabricate a wide range of thermoplastic components per the specifications of our customers. Please do not hesitate to call or fax us your requirements.

Typical Properties:

Nylon: (Average Value)

Physical Properties

Specific Gravity	1.15
Specific Volume (cu. in. per lb.)	24.05
Refractive Index	----
Tensile Strength (PSI)	11,000 - 14,000
Elongation (%)	10 - 60
Modulus of Elasticity in Tension (10^3 , PSI)	2.4 - 4.0
Compressive Strength (PSI)	14,000
Flexural Strength (PSI)	16,500 - 17,500
Impact Strength (ft.-lb. per in. of notch)	1.2 - 2.5
Rockwell Hardness	R110 - R120
Thermal Conductivity	----
Specific Heat (cal per C° per gm)	----
Thermal Expansion (.001 per C°)	9.0
Resistance to Heat (F°, continuous)	350
Heat Distortion Temperature (F°)	410 - 420 (66 psi)
Volume Resistivity	2.6×10

All of the information, suggestions, and recommendations pertaining to the properties and uses of the products herein are based upon tests and data believed to be accurate; however, the final determination regarding the suitability of any material described herein for the use contemplated, the manner of such use, and whether the use infringes any patents is the sole responsibility of the user. There is no warranty, expressed or implied, including, without limitation warranty of merchantability or fitness for a particular purpose. Under no circumstances shall we be liable for incidental or consequential loss or damage.

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Typical Properties:

**Nylon:
(Average Value)**

Electrical Properties

Dielectric Strength (short time 1/8 thick)	380
Dielectric Strength (step-by-step 1/8 thick)	340
Dielectric Constant (60 cycles)	4.0
Dielectric Constant (10^3 cycles)	3.8
Dielectric Constant (10^6 cycles)	3.3
Dissipation (Power) Factor (60 cycles)	.015
Dissipation (Power) Factor (10^3 cycles)	.02
Dissipation (Power) Factor (10^6 cycles)	.05
Arc Resistance (Seconds)	----

Chemical Properties

Water Absorption (24 hr., 1/8 in thick, %)	.06
Burning Rate	Self-extinguishing
Effect of Sunlight	Slight Discoloration
Effect of Weak Acids	Resistant
Effect of Strong Acids	Attacked
Effect of Weak Alkalies	None
Effect of Strong Alkalies	None
Effect of Organic Solvents	Resistant to common solvents
Clarity	Translucent to Opaque