Nylon 6

Nylon 6, also known as polyamide 6 or PA6, is a thermoplastic material known for its high strength, toughness, and excellent wear resistance. It offers good chemical resistance and low friction properties. Nylon 6 is commonly used in applications such as automotive components, gears, bearings, and various consumer products.

Chemical Description

Description	Value
Material Type	Semi-Crystalline Thermoplastic
Chemical Name	PA Polyamide Type 6
Additives	Unfilled
Color	Yellow
UV Resistant	No

Physical Properties

Property	Maximum Unless Range is Specified
Density,lbs/in3	0.042
Water Absorption, 24 hrs, Immersion,% by wt.	0.6
Coefficient of Linear Thermal Expansion, x10-5 in./in./°F	5
Heat Deflection Temp,°F at 263psi	200
Melting Point Temp,°F	420
Max Continuous Operating Temp,°F	200
Minimum Operating Temp,°F	-22
Flammability Rating,UL94	HB
Dielectric Strength,V/mil	500
Dielectric Constant at 1 MHz	3.7
Surface Resistivity,ohm/square	>10^13

Mechanical Properties

Property	Maximum Unless Range is Specified
Tensile Strength,ksi	12
Tensile Modulus,ksi	400
Compressive Strength,ksi	15
Compressive Modulus,ksi	400
Flexural Strength,ksi	16
Flexural Modulus,ksi	500
Elongation at Break	20%
Hardness, Rockwell R	115
Notched Izod Impact Strength,ft-lb/in	0.4

The material properties in this datasheet are provided by one of the manufacturers collaborating with Naxtry. Please note that material properties may slightly vary among different manufacturers. Naxtry can accommodate customer requests for specific materials or brands.