

Nylon 6/6, also known as polyamide 6/6 or PA6/6, is a thermoplastic material known for its high strength, stiffness, and excellent resistance to wear and abrasion. It offers good chemical resistance and dimensional stability. Nylon 6/6 is widely used in applications such as mechanical parts, electrical connectors, and automotive components.

Chemical Description

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

Physical Properties

Property	Maximum Unless Range is Specified
Density,lbs/in ³	0.042
Water Absorption, 24 hrs, Immersion,% by wt.	0.3
Coefficient of Linear Thermal Expansion, x10 ⁻⁵ in./in./°F	5.5
Heat Deflection Temp,°F at 263psi	200
Max Continuous Operating Temp,°F	210
Minimum Operating Temp,°F	-22
Flammability Rating,UL94	HB
Dielectric Strength,V/mil	400
Dielectric Constant at 1 MHz	3.6
Surface Resistivity,ohm/square	>10 ¹³

Mechanical Properties

Property	Maximum Unless Range is Specified
Tensile Strength,ksi	12
Tensile Modulus,ksi	425
Compressive Strength,ksi	12.5
Compressive Modulus,ksi	420
Flexural Strength,ksi	15
Flexural Modulus,ksi	450
Elongation at Break	50%
Hardness, Rockwell R	115
Notched Izod Impact Strength,ft-lb/in	0.6

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.