Xometry

Datasheet

PA 6/6

Details

This is the most common variant of nylon used for engineering applications. It has a high melting temperature. However, it has a relatively low impact strength. It is stiff and resistant to wear and hydrocarbons. It is used in applications that require high strength, ductility and chemical resistance.

Key Features

Stiff • Resistant to wear and hydrocarbons

Thermal Properties

Property	Value
Heat deflection [°C]	235
Glass transition temperature [°C]	47
Vicat softening temperature [°C]	250
Coefficient of thermal expansion [K-1 · 10-6]	80
Thermal conductivity [W/m · K]	0.36
Specific heat capacity [J/kg · K]	1500
Melting point [°C]	255

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Mechanical Properties

Property	Value
Tensile strength [MPa]	83
Modulus of elasticity [GPa]	3.79
Flexural strength [MPa]	117
Flexural modulus [GPa]	2.83
Hardness	168
Impact strength [KJ/m^2]	5
Elongation at break [%]	40

Physical Properties

Property	Value
Density [g/cm^3]	1.14
Water Absorption [%]	1
Electrical Resistivity [ohm-cm]	14×10^{15}