



Nylon 66 / Nylon 6/6

Alternative Designations

PA 66

Key Features

Stiff • Resistant to wear and hydrocarbons • Light weight • Good mechanical strength

Description

It is a synthetic polyamide, created by combining hexamethylene diamine and adipic acid. This is the most common variant of nylon used for engineering applications. It has a high melting temperature. However, it has no resistance against UV rays. It is stiff and resistant to wear and hydrocarbons. It is used in applications that require high strength, ductility, and chemical resistance.

Mechanical Properties

Tensile modulus	3500 MPa
Tensile strength	85 MPa
Elongation at break	70%
Flexural strength	110 MPa
Flexural modulus	3.1 GPa
Hardness (Shore D)	168

Thermal Properties

Melting temperature (20°C/min)	258°C
Heat deflection temperature (1.80 MPa)	100°C
Heat deflection temperature (0.45 MPa)	170°C
Softening temperature	250°C

Physical Properties

Density	1.15 g/cm ³
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Reference

Datasheets provided by Xometry contain materials sourced through trusted OEMs, material distributors, and databases. Please visit Materialdatacenter.com for further information on this material.