

Data Sheet: Nylon PA11

Details

This material is highly impact resistant with a shore hardness of 80. It has a heat deflection temperature of 180°C with excellent resistance to hydrocarbons. It is 100% biocompatible with up to 70% reusability. It is used for cases and containers of consumer goods.

Key Features

High impact resistance • Resistant to hydrocarbons • Biocompatible

Thermal Properties

Property	Value
Heat deflection [°C]	110
Glass transition temperature [°C]	46
Vicat softening temperature [°C]	140
Coefficient of thermal expansion [K-1 · 10-6]	85
Thermal conductivity [W/m · K]	0.23
Specific heat capacity [J/kg · K]	2400
Melting point [°C]	181

Mechanical Properties

Property	Value
Tensile strength [MPa]	122
Modulus of elasticity [GPa]	6.8
Flexural strength [MPa]	102.7
Flexural modulus [GPa]	1.38

Hardness	105
Impact strength [KJ/m ²]	10
Elongation at break [%]	9

Physical Properties

Property	Value
Density [g/cm ³]	1.1
Water Absorption [%]	1.6
Electrical Resistivity [ohm-cm]	2×10^{15}

Reference

Datasheets provided by Xometry contain materials sourced through trusted OEMs, material distributors, and databases. Please visit [Materialdatacenter.com](https://www.materialdatacenter.com) for further information on this material.