

# PA12-FDM

## Details

Nylon PA 12 is one of the most popular 3D printing materials. It has good mechanical properties such as toughness, tensile strength and impact strength. This material can also be flexed without fracture. It has a melting point of 178°C with low water absorption. It is broadly used for sterilized films for packaging materials in the food and pharmaceutical fields.

## Key Features

Good impact strength • Tough • Can be flexed without fracture

## Thermal Properties

Property	Value
Heat deflection [°C]	97
Glasstransitiontemperature [°C]	75.2
Vicat softening temperature [°C]	155
Coefficient of thermal expansion [K-1·10 <sup>-6</sup> ]	111
Thermal conductivity [W/m·K]	2.96
Specific heat capacity [J/kg·K]	1185
Melting point [°C]	178

## Mechanical Properties

Property	Value
Tensile strength [MPa]	53
Modulus of elasticity [GPa]	1.31
Flexural strength [MPa]	68.9
Flexural modulus [GPa]	1.31
IZOD Impact [J/m]	150
Elongation at break [%]	9.5

## Physical Properties

Property	Value
Density [g/cm <sup>3</sup> ]	1.0
Water Absorption [%]	0.9
Electrical Resistivity [ohm-cm]	$2.32 \times 10^{14}$