

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 ⁻⁶] | 111 |
| Thermal conductivity [W/m·K] | 2.96 |
| Specific heat capacity [J/kg·K] | 1185 |
| Melting point [°C] | 178 |

Datasheet >

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 ³] | 1.0 |
| Water Absorption [%] | 0.9 |
| Electrical Resistivity [ohm-cm] | 2.32×10^{14} |