# Nylon 6 Powder

Nylon 6 powder provides fine particle stability, wear resistance, and adhesion for composites, coatings, additive manufacturing, and membranes requiring strong mechanical and chemical performance. **SKU:** 1000026719-group
**Product Code:** AM30-PD-000155

## Material Properties for Polymers

### Chemical Resistance

| Element | Value |
|---|---|
| Acids - concentrated | Poor |
| Acids - dilute | Poor |
| Alcohols | Good |
| Alkalis | Good-Fair |
| Aromatic hydrocarbons | Good |
| Greases and Oils | Good |
| Halogenated Hydrocarbons | Good-Poor |
| Halogens | Poor |
| Ketones | Good |

### Mechanical Properties

| Element | Value |
|---|---|
| Coefficient of friction | 0.2-0.3 |
| Hardness - Rockwell | M82 |
| Poisson's ratio | 0.39 |
| Tensile modulus( GPa ) | 2.6-3 |
| Izod impact strength( J m?¹ ) | 30-250 |
| Abrasive resistance - ASTM D1044( mg/1000 cycles ) | 5 |
| Tensile strength( MPa ) | 78 |

### Electrical Properties

| Element | Value |
|---|---|
| Dielectric constant @1MHz | 3.6 |

| Element | Value |
|---|---|
| Dissipation factor @ 1kHz | 0.2 |
| Dielectric strength( kV mm?¹ ) | 25 |
| Surface resistivity( Ohm/sq ) | 5x10¹? |
| Volume resistivity( Ohmcm ) | 5x10¹² |

## Physical Properties

| Element | Value |
|---|---|
| Flammability | HB |
| Radiation resistance | Fair |
| Refractive index | 1.53 |
| Resistance to Ultra-violet | Poor |
| Limiting oxygen index( % ) | 25 |
| Water absorption - equilibrium( % ) | 8 |
| Water absorption - over 24 hours( % ) | 2.7 |
| Density( gcm?³ ) | 1.13 |

## Thermal Properties

| Element | Value |
|---|---|
| Heat-deflection temperature - 0.45MPa( C ) | 200 |
| Heat-deflection temperature - 1.8MPa( C ) | 80 |
| Lower working temperature( C ) | -40 |
| Upper working temperature( C ) | 80-160 |
| Specific heat( J K?¹ kg?¹ ) | 1700 |
| Thermal conductivity( W m?¹ K?¹ ) | 0.24-0.28@23°C |
| Coefficient of thermal expansion( x10?? K?¹ ) | 95 |