

# Nylon 46 Rod

**Formula:** PA 4,6

**Diameter:** 50mm

**Length:** 500mm

**CAS Number:** 50327-22-5

**UOM Code:** 092-587-67

**SKU:** 1000013058-group

**Product Code:** AM34-RD-000125

## Material Properties for Polymers

### Electrical Properties

Element	Value
Dielectric constant @ 1MHz	3.8-4.3
Dissipation factor @ 1kHz	0.35
Dielectric strength( kV mm <sup>2</sup> )	20
Surface resistivity( Ohm/sq )	10 <sup>12</sup> -10 <sup>17</sup>
Volume resistivity( Ohmcm )	10 <sup>13</sup> -10 <sup>17</sup>

### Physical Properties

Element	Value
Flammability	V2 @ 0.8mm
Radiation resistance	Fair
Limiting oxygen index( % )	24
Water absorption - equilibrium( % )	3.7
Water absorption - over 24 hours( % )	1.3
Density( gcm <sup>3</sup> )	1.18

### Mechanical Properties

Element	Value
Hardness - Rockwell	M92
Tensile modulus( GPa )	3.1-3.3
Izod impact strength( J m <sup>2</sup> )	80
Tensile strength( MPa )	55-100

## Thermal Properties

Element	Value
Heat-deflection temperature - 0.45MPa( C )	220
Heat-deflection temperature - 1.8MPa( C )	160
Lower working temperature( C )	-40
Upper working temperature( C )	100-200
Thermal conductivity( W m <sup>-1</sup> K <sup>-1</sup> )	0.3@23°C
Coefficient of thermal expansion( x10 <sup>-5</sup> K <sup>-1</sup> )	80-90