

Unionfab SLS Nylon Data Sheet

Base Data		PA 12 White	PA 12 Black	PA 11 White	PA 11 Black
Powder Density		0.49 g/cm ³	g/cm ³	0.50 g/cm ³	0.50 g/cm ³
Part Density		0.98 g/cm ³	0.99 g/cm ³	1.01 g/cm ³	1.01 g/cm ³
Color		White	Black	White	Black
Heat Data					
FUP (10°C /min) GB/T 19466.1-2004		185 °C	184.5 °C	201 °C	202 °C
HDT GB/T 1634.2-2004	1.82 MPa	84.5 °C	73.1 °C	51 °C	47 °C
	0.46 Mpa	148.2 °C	146.1 °C	151.1 °C	185 °C
Mechanical Data					
Tensile Modulus GB/T 1040.2- 2006		45 MPa	47 MPa	48 MPa	76 MPa
Tensile Strength at Yield GB/T 1040.2-2006		1600 MPa	1951 MPa	1483 MPa	1830 MPa
Elongation at Break GB/T 1040.2-2006		38%	19%	56%	30%
Flexural Strength GB/T 9341- 2008		46.1 MPa	40.1 MPa	59 MPa	57 MPa

Flexural Modulus GB/T 9341-2008	1297 MPa	1053.7 MPa	1470 MPa	1480 MPa
Notched Impact Strength GB/T 1843-2008	4.8 KJ/m ²	8.6 KJ/m ²	26 KJ/m ²	23 KJ/m ²
Unnotched impact strength GB/T 1843-2008	13.3 KJ/m ²	23.1 KJ/m ²	Pending KJ/m ²	Pending KJ/m ²

Below is Glass Filled Nylon

Base Data		Glass Filled Nylon Gray	Glass Filled Nylon Black
Powder Density		0.68 g/cm ³	0.69 g/cm ³
Part Density		1.31 g/cm ³	1.35 g/cm ³
Color		Light Gray	Black
Heat Data			
FUP (10°C /min) GB/T 19466.1-2004		184.5 °C	183.5 °C
HDT GB/T 1634.2-2004	1.82 MPa	69 °C	69.5 °C
	0.46 Mpa	153.1 °C	155.1 °C
Mechanical Data			
Tensile Modulus GB/T 1040.2-2006		45 MPa	43 MPa
Tensile Strength at Yield GB/T 1040.2-2006		2600 MPa	2700 MPa

Elongation at Break GB/T 1040.2-2006	6.7%	5.4%
Flexural Strength GB/T 9341- 2008	60 MPa	62 MPa
Flexural Modulus GB/T 9341- 2008	2100 MPa	2200 MPa
Notched Impact Strength GB/T 1843-2008	6.1 KJ/m ²	6.6 KJ/m ²
Unnotched impact strength GB/T 1843-2008	31.2 KJ/m ²	31.8 KJ/m ²