



General Properties	FS 3300PA PA1212-based powder	FS 3401GB Glass bead filled	FS 3400CF Carbon fiber filled
Bulk Density	0.48 g/cm ³	0.67 g/cm ³	0.51 g/cm ³
Part Density	0.95 g/cm ³	1.26 g/cm ³	1.08 - 1.10 g/cm ³
Color	White	Gray	Black
Thermal Properties			
Melting Point(10°C /min) <small>ISO 11357.1:1997</small>	183 °C	184 °C	184 °C
Heat Deflection Temp(HDT) @ 1.8 MPa <small>ISO 75-2:2003</small>	83.5 °C	68.8 °C	72 °C
Heat Deflection Temp(HDT) @ 0.45 MPa <small>ISO 75-2:2003</small>	146.2 °C	152.4 °C	168 °C
Mechanical Properties			
Tensile Strength <small>ISO 527.2:1993</small>	46 MPa	44 MPa	65-70 MPa
Tensile Modulus <small>ISO 527.2:1993</small>	1602 MPa	2644 MPa	4700 - 6500 MPa
Elongation at Break <small>ISO 527.2:1993</small>	36 %	9.3 %	3.0 - 4.0 %
Flexural Strength <small>ISO 178:2001</small>	46.3 MPa	60.3 MPa	94 - 113 MPa
Flexural Modulus <small>ISO 178:2001</small>	1300 MPa	2210 MPa	4500 - 5600 MPa
Izod Impact Strength (notched) <small>ISO 180:2000</small>	4.9 KJ/m ²	6.6 KJ/m ²	4.3 KJ/m ²
Izod Impact Strength (unnotched) <small>ISO 180:2000</small>	13.2 KJ/m ²	31.1KJ/m ²	16 KJ/m ²

General Properties	FS 3250MF Mineral fiber filled	FS 4100PA PA11 powder
Bulk Density	0.55 g/cm ³	0.49 g/cm ³
Part Density	1.20 g/cm ³	1.03 g/cm ³
Color	Light gray	White
Thermal Properties		
Melting Point(10°C /min) <small>ISO 11357.1:1997</small>	183 °C	203 °C
Heat Deflection Temp(HDT) @ 1.8 MPa <small>ISO 75-2:2003</small>	129 °C	49 °C
Heat Deflection Temp(HDT) @ 0.45 MPa <small>ISO 75-2:2003</small>	171 °C	150 °C
Mechanical Properties		
Tensile Strength <small>ISO 527.2:1993</small>	51 MPa	49 MPa
Tensile Modulus <small>ISO 527.2:1993</small>	6130 MPa	1542 MPa
Elongation at Break <small>ISO 527.2:1993</small>	5 %	58 %
Flexural Strength <small>ISO 178:2001</small>	76 MPa	60 MPa
Flexural Modulus <small>ISO 178:2001</small>	4633 MPa	1463 MPa
Izod Impact Strength (notched) <small>ISO 180:2000</small>	5.59 KJ/m ²	25 KJ/m ²
Izod Impact Strength (unnotched) <small>ISO 180:2000</small>	20.78 KJ/m ²	No break

POLYMER LASER SINTERING MATERIALS



General Properties	Ultrasint X043 PA6 powder	Ultrasint X028 PA6 powder	FS 8100PPS PPS powder
Bulk Density	0.52 g/cm ³	0.52 g/cm ³	0.57 g/cm ³
Part Density	1.14 g/cm ³	1.15 g/cm ³	1.28 g/cm ³
Color	Black	Light yellow	Light yellow
Thermal Properties			
Melting Point(10°C /min) <small>ISO 11357.1:1997</small>	225 °C	220°C	295 °C
Heat Deflection Temp(HDT) @ 1.8 MPa <small>ISO 75-2:2003</small>	93 °C	100 °C	116 °C
Heat Deflection Temp(HDT) @ 0.45 MPa <small>ISO 75-2:2003</small>	191 °C	199 °C	220 °C
Mechanical Properties			
Tensile Strength <small>ISO 527.2:1993</small>	74 MPa	78 MPa	47 MPa
Tensile Modulus <small>ISO 527.2:1993</small>	3457 MPa	3550 MPa	3412 MPa
Elongation at Break <small>ISO 527.2:1993</small>	4.0 %	13.0 %	3.8 %
Flexural Strength <small>ISO 178:2001</small>	99 MPa	121 MPa	63 MPa
Flexural Modulus <small>ISO 178:2001</small>	2842 MPa	3300 MPa	2906 MPa
Izod Impact Strength (notched) <small>ISO 180:2000</small>	10.5 KJ/m ²	3.1 KJ/m ²	2.1 KJ/m ²
Izod Impact Strength (unnotched) <small>ISO 180:2000</small>	67.2 KJ/m ²	9.7 KJ/m ²	5.7 KJ/m ²

General Properties	FS 1092A-TPU TPU powder	FS 1088A-TPU TPU powder
Bulk Density	0.64 g/cm ³	0.46 g/cm ³
Part Density	1.12 g/cm ³	1.20 g/cm ³
Color	White	White
Thermal Properties		
Melting Point(10°C /min) <small>ISO 11357.1:1997</small>	169 °C	160 °C
Heat Deflection Temp(HDT) @ 1.8 MPa <small>ISO 75-2:2003</small>	n/a	n/a
Heat Deflection Temp(HDT) @ 0.45 MPa <small>ISO 75-2:2003</small>	n/a	n/a
Mechanical Properties		
Tensile Strength <small>ISO 527.2:1993</small>	18 MPa	20 MPa
Tensile Modulus <small>ISO 527.2:1993</small>	61 MPa	30 MPa
Elongation at Break <small>ISO 527.2:1993</small>	276 %	340 %
Flexural Strength <small>ISO 178:2001</small>	6.2 MPa	n/a
Flexural Modulus <small>ISO 178:2001</small>	86 MPa	27 MPa
Izod Impact Strength (notched) <small>ISO 180:2000</small>	No break	No break
Izod Impact Strength (unnotched) <small>ISO 180:2000</small>	No break	No break