

# MATERIALS COMPARISON - Technical Datasheet

Plastics



A brand of BASF - We create chemistry

	MATERIAL	TENSILE MODULUS	TENSILE STRENGTH	ELONGATION AT BREAK	MELTING POINT	HARDNESS SHORE	CHARPY IMPACT NOTCHED	CHARPY IMPACT UNNOTCHED	HDT B (0.45 MPa, DRY)	CERTIFICATIONS	REBOUND RESILIENCE
SLS	<a href="#">PA12</a>	1700 ± 150 N/mm <sup>2</sup>	45 ± 3 N/mm <sup>2</sup>	20 ± 5 %	min. 172°C, max. 180°C	75±2 D	4,8±0,3 kJ/m <sup>2</sup>	-	154 °C	<a href="#">Biocompatibility</a> <a href="#">Food assessment</a> <a href="#">REACH</a>	-
	<a href="#">Nylon 3200 Glass Filled</a>	3200 MPa	51 MPa	9%	176°C	80 D	5,4 kJ/m <sup>2</sup>	-	157 °C	<a href="#">REACH</a>	-
	<a href="#">Alumide</a>	3600 ± 150 N/mm <sup>2</sup>	45 ± 3 N/mm <sup>2</sup>	3 ± 0.5 %	min. 172°C, max. 180°C	76 D	4.6 kJ/m <sup>2</sup>	-	177 °C	<a href="#">REACH</a>	-
	<a href="#">PEBA 2301</a>	X/ Y: 75 MPa Z: 80 MPa	X/ Y: 8MPa Z: 7 MPa	200 ± 70 %	150°C	87 A	-	-	-	-	-
	<a href="#">Ultrasint® TPU 88A</a>	75 MPa	8 MPa	270 %	-	88-90 A	no break	-	-	-	63 %
	<a href="#">Ultrasint® PA6 FR</a>	2450 MPa	41 MPa	2.6 %	218 °C	-	1.6 kJ/m <sup>2</sup>	7.4 kJ/m <sup>2</sup>	207 °C	-	-
	<a href="#">Ultrasint® PA6 ME</a>	3300 MPa	62 MPa	7 %	219 °C	-	3.1 kJ/m <sup>2</sup>	27.8 kJ/m <sup>2</sup>	209 °C	-	-
	<a href="#">Ultrasint® PP nat 01</a>	1400 MPa	28 MPa	X: 30 % Z: 1%	140 °C	-	3.3 kJ/m <sup>2</sup>	29 kJ/m <sup>2</sup>	102 °C	-	-
MJF	<a href="#">PA12</a>	1700 MPa	48 MPa	20%	187°C	-	-	-	175 °C	<a href="#">Biocompatibility</a> <a href="#">PAHs certificate</a> <a href="#">RoHS/REACH</a> <a href="#">UL 94 and UL 746A</a>	-
	<a href="#">PP</a>	1600 MPa	30 MPa	X/Y: 20% Z: 18%	187°C	-	-	-	100 °C	-	-
	<a href="#">Ultrasint® TPU01</a>	75 MPa	9 MPa	220%	120-150 °C	88 A	no break	-	-	-	63 %
FDM	<a href="#">PLA Big-Rep</a>	-	60 MPa	-	-	60 D	7.5 kJ/m <sup>2</sup>	-	40 °C	-	-
Colorjet	<a href="#">Multicolor</a>	6405 N/mm <sup>2</sup>	9 N/mm <sup>2</sup>	0.25%	112 °C	-	-	-	-	-	-

All materials available at: [sculpteo.com](https://www.sculpteo.com)