

PolyJet Materials

in Detail

	Digital ABS Plus	High Temperature	Transparent			
Materials	Digital ABS Plus, Ivory, made of RGD515 Plus & RGD531	RGD525	RGD720, VeroMagentaV (RGD852)*, VeroYellowV (RGD838)*, VeroCyanV (RGD845)*	VeroClear (RGD810)	VeroUltraClear (RGC820)	VeroUltraClearS (RGD821)
Tensile Strength	55 – 60 MPa (8,000 – 8,700 psi)	70 – 80 MPa (10,000 – 11,500 psi)	50 – 65 MPa (7,250 – 9,450 psi)	50 – 65 MPa (7,250 – 9,450 psi)	39 – 43 MPa (5,650 – 6,240 psi)	26 – 37 MPa (3,770 – 5,370 psi)
Elongation at Break	25 – 40%	10 – 15%	15 – 25%	10 – 25%	20 – 35%	45 – 60%
Modulus of Elasticity	2,600 – 3,000 MPa (375,000 – 435,000 psi)	3,200 – 3,500 MPa (465,000 – 510,000 psi)	2,000 – 3,000 MPa (290,000 – 435,000 psi)	2,000 – 3,000 MPa (290,000 – 435,000 psi)	1,400 – 2,100 MPa (203,000 – 304,600 psi)	1500 – 2000 MPa (217,000 – 290,000 psi)
Flexural Strength	65 – 75 MPa (9,500 – 11,000 psi)	110 – 130 MPa (16,000 – 19,000 psi)	80 – 110 MPa (12,000 – 16,000 psi)	75 – 110 MPa (11,000 – 16,000 psi)	58 – 72 MPa (8,400 – 10,400 psi)	48 – 60 MPa (6,700 – 8,700 psi)
Flexural Modulus	1,700 – 2,200 MPa (245,000 – 320,000 psi)	3,100 – 3,500 MPa (450,000 – 510,000 psi)	2,700 – 3,300 MPa (390,000 – 480,000 psi)	2,200 – 3,200 MPa (320,000 – 465,000 psi)	1,900 – 2,300 MPa (275,000 – 333,000 psi)	1300 – 1800 MPa (189,000 – 261,000 psi)
HDT, °C @ 1.82 MPa	51 – 55 °C (124 – 131 °F)	55 – 57 °C (131 – 135 °F)	45 – 50 °C (113 – 122 °F)	45 – 50 °C (113 – 122 °F)	Before photobleaching: 47 – 49 °C (117 – 120 °F) After photobleaching: 48 – 52 °C (118 – 126 °F)	45 – 48 °C (113 – 118 °F)
Izod Notched Impact	90 – 110 J/m (1.69 – 2.06 ft lb/inch)	14 – 16 J/m (0.262 – 0.300 ft lb/inch)	20 – 30 J/m (0.375 – 0.562 ft lb/inch)	20 – 30 J/m (0.375 – 0.562 ft lb/inch)	20 – 30 J/m (0.375 – 0.562 ft lb/inch)	20 – 30 J/m (0.375 – 0.562 ft lb/inch)
Water Absorption	–	1.2 – 1.4%	1.5 – 2.2%	1.1 – 1.5%	1.25 – 1.4%	1.2 – 1.4%
Tg	47 – 53 °C (117 – 127 °F)	62 – 65 °C (144 – 149 °F)	48 – 50 °C (118 – 122 °F)	52 – 54 °C (126 – 129 °F)	52 – 54 °C (126 – 129 °F)	47 – 48 °C (117 – 118 °F)
Shore Hardness	85 – 87 Scale D	87 – 88 Scale D	83 – 86 Scale D	83 – 86 Scale D	80 – 85 Scale D	75 – 80 Scale D
Rockwell Hardness	67 – 69 Scale M	78 – 83 Scale M	73 – 76 Scale M	73 – 76 Scale M	70 – 75 Scale M	60 – 70 Scale M
Polymerized Density	1.17 – 1.18 g/cm³	1.17 – 1.18 g/cm³	1.18 – 1.19 g/cm³	1.18 – 1.19 g/cm³	1.18 – 1.19 g/cm³	1.17 – 1.18 g/cm²
Ash Content	–	0.38 – 0.42%	0.01 – 0.02%	0.02 – 0.06%	0.02 – 0.06%	0.02 – 0.06%

* Tinted Transparent

Rigid Opaque (Vero Family)			Rigid Opaque (VeroUltra Family)		
Materials	Vero PureWhite (RGD837), VeroGray (RGD850), VeroBlackPlus (RGD875), VeroWhitePlus (RGD835), VeroYellow (RGD836), VeroCyan (RGD843), VeroMagenta (RGD851), VeroMagentaV (RGD852)*, VeroYellowV (RGD838)*, VeroCyanV (RGD845)*	VeroBlue (RGD840)	DraftGrey	VeroUltraWhite (RGD825) VeroUltraBlack (RGD865)	VeroUltraWhiteS (RGD824) VeroUltraBlackS (RGD864)
Tensile Strength	50 – 65 MPa (7,250 – 9,450 psi)	50 – 60 MPa (7,250 – 8,700 psi)	50 – 65 MPa (7,250 – 9,450 psi)	50-65 (7250-9430 psi)	50-65 (7250-9430 psi)
Elongation at Break	10 – 25%	15 – 25%	10 – 25%	5-20 %	5-20 %
Modulus of Elasticity	2,000 – 3,000 MPa (290,000 – 435,000 psi)	2,000 – 3,000 MPa (290,000 – 435,000 psi)	2,000 – 3,000 MPa (290,000 – 435,000 psi)	2000 - 3000 MPa (290000 - 435000 psi)	2000 - 3000 MPa (290000 - 435000 psi)
Flexural Strength	75 – 110 MPa (11,000 – 16,000 psi)	60 – 70 MPa (8,700 – 10,200 psi)	75 – 110 MPa (11,000 – 16,000 psi)	65-85 (9400-12300 psi)	65-85 (9400-12300 psi)
Flexural Modulus	2,200 – 3,200 MPa (320,000 – 465,000 psi)	1,900 – 2,500 MPa (265,000 – 365,000 psi)	2,200 – 3,200 MPa (320,000 – 465,000 psi)	2000-2800 (290000-406100 psi)	2000-2800 (290000-406100 psi)
HDT, @ 0.45 MPa	–	–	–	48-52 °C (118-126 °F)	48-52 °C (118-126 °F)
HDT, °C @ 1.82 MPa	45 – 50 °C (113 – 122 °F)	45 – 50 °C (113 – 122 °F)	45 – 50 °C (113 – 122 °F)	44-47 (111-117 °F)	44-47 °C (111-117 °F)
Izod Notched Impact	20 – 30 J/m (0.375 – 0.562 ft lb/inch)	20 – 30 J/m (0.375 – 0.562 ft lb/inch)	20 – 30 J/m (0.375 – 0.562 ft-lb/inch)	20-30 J/m (0.375 – 0.562 ft-lb/in.)	20-30 J/m (0.375 – 0.562 ft-lb/in.)
Water Absorption	1.1 – 1.5%	1.5 – 2.2%	1.1 – 1.5%	1.1-1.4%	1.1-1.4%
Tg	52 – 54 °C (126 – 129 °F)	48 – 50 °C (118 – 122 °F)	52 – 54 °C (126 – 129 °F)	54-56 °C (124-133 °F)	49-56 °C (120 - 133 °F)
Shore Hardness	83 – 86 Scale D	83 – 86 Scale D	83 – 86 Scale D	83-86	83 – 86
Rockwell Hardness	73 – 76 Scale M	73 – 76 Scale M	73 – 76 Scale M	–	–
Polymerized Density	1.17 – 1.18 g/cm³	1.18 – 1.19 g/cm³	1.17 – 1.18 g/cm³	1.19-1.23	1.19-1.23
Ash Content	0.23 – 0.26% (VeroGray, VeroWhitePlus), 0.01 – 0.02% (VeroBlackPlus, VeroMagentaV, VeroYellowV)	0.21 – 0.22%	0.23 – 0.26%	–	–

* Opaque only when printed with core

Rubberlike						
Materials	TangoBlack (FLX973)	TangoGray (FLX950)	TangoBlackPlus (FLX980) TangoPlus (FLX930)	Agilus30 Clear (FLX935) Agilus30 Black (FLX 985)	Agilus30 White (FLX945)	Agilus30 Cyan (FLX941) Agilus30 Magenta (FLX951) Agilus30 Yellow (FLX931)
Tensile Strength	1.8 – 2.4 MPa (115 – 350 psi)	3.0 – 5.0 MPa (435 – 725 psi)	0.8 – 1.5 MPa (115 – 220 psi)	2.4 – 3.1 MPa (348 – 450 psi)	2.1 – 2.6 MPa (305 – 377 psi)	2.2 – 2.6 MPa (319 – 377 psi)
Elongation at Break	45 – 55%	45 – 55%	170 – 220%	220 – 240%	185 – 230%	315 – 335%
Shore Hardness	60 – 62 Scale A	73 – 77 Scale A	26 – 28 Scale A	30 – 35 Scale A	30 – 40 Scale A	28-33 Scale A
Polymerized Density	1.14 – 1.15 g/cm³	1.16 – 1.17 g/cm³	1.12 – 1.13 g/cm³	1.14 – 1.15 g/cm³	1.14 – 1.15 g/cm³	1.14 – 1.15 g/cm³