Property \ Material	Units	PLA Coloured	PLA + Coloured	Rapid PLA + Coloured	PLA PRO	PLA MATT	PLA CF	Rapid PETG	PETG PRO	PETG-CF	PETG-GF	TPU-95A	ASA	PAHT-CF	PC
Print Settings															
Drying Temp	°C	55 ± 5	55 ± 5	55 ± 5	55 ± 5	55 ± 5	55 ± 5	70 ± 5	70 ± 5	70 ± 5	70 ± 5	70 ± 5	80 ± 5	80 ± 5	80 ± 5
Temp & Humidity	°C & %RH	<50 <20%	<50 <20%	<50 <20%	<50 <20%	<50 <20%	<50 <20%	<70 <20%	<70 <20%	<70 <20%	<70 <20%	<70 <20%	<80 <20%	<70 <20%	<50 <20%
Nozzle Temp	°C	190-230	200=230	200-230	180-210	190-230	190-230	240-270	230-260	240-270	240-270	220-240	240-270	260-290	260-290
Bed Temp	°C	35-65	35-65	35-65	35-65	35-65	35-65	65-70	65-70	90-110	65-75	30-45	90-100	100-120	90-110
Plate Type		Textured or Other	Textured or Other	Textured or Other	Textured or Other	Textured or Other	Textured or Other	Textured or Other	Textured or Other	Textured or Other	Textured or Other	Textured or Other	Textured or Other	Textured or Other	Textured or Other
Print Speed	mm/s	<300	<280	<600	<300	<300	<300	<600	<270	<220	<220	<60	<270	<100	<100
Physical Properties															
Density	g/cm³	1.26	1.3	1.23	1.24	1.26	1.24	1.29	1.27	1.29	1.3	1.16	1.09	1.08	1.2
Melt Temp	°C	158	161	160	162	163	163	216	218	226	226	188	214	225	228
VICAT Soft Temp	°C	62	63	62	62	63	64	70	71	83	83	N/A	102	225	119
Heat Deflection Temp	°C	57	56	57	56	55	56	72	73	73.9	73.9	N/A	99	193	109
Mechanical Properties															
Tensile Strength	Mpa	38 ± 3	38 ± 2	39 ± 2	32 ± 2	30 ± 1	39 ± 3	42 ± 2	40 ± 2	51 ± 8	50 ± 3	16 ± 2	35 ± 2	87 ± 3	56 ± 2
Breaking Elongation XY	%	10.5% ± 2.1%	7.9% ± 1.6%	8.5% ± 1.2%	14.1% ± 2.1%	7.9% ± 1.1%	7.5% ± 1.3%	8.9% ± 1/5%	7.6% ± 1.1%	9.6% ± 1.0%	7.9% ± 1%	>500%	9.4% ± 2.3%	14.2% ± 1.1%	8.8% ± 1.9%
Bending Modulus XY	MPa	2993 ± 182	2979 ± 156	2846 ± 175	2964 ± 169	2996 ± 159	3341 ± 172	2097 ± 173	2111 ± 119	3340 ± 21	3345 ± 88	124.8 (no fracture)	1905 ± 131	5089 ± 54	2728 ± 113
Bending Strength	MPa	72 ± 5	74 ± 4	71 ± 6	66 ± 3	75 ± 3	78 ± 2	68 ± 2	70 ± 2	85 ± 2	83 ± 3		65 ± 4	138 ± 3	114 ± 5
Impact Strength	kJ/m²	66.2 ± 3.9	65.5 ± 3.6	50.4 ± 2.8	30.2 ± 2.3	29.3 ± 2.9	24.7 ± 1.5	87.6 ± 4.2	68.5 ± 2.5	70.7 ± 6.2	51.9 ± 5.2		40.1 ± 3.7	86.4 ± 3.4	797 ± 3.2
		Smooth and fine finish, easy to print	Sharp details and high quality	Fast printing and high compatibility	Fast printing and high compatibility	Matte finish, uniform & refined appearance	Carbon fiber reinforced, higher strength and stiffness	High-speed printing, increased efficiency	Low shrinkage, superior dimensional stability	High strength and wear resistance, excellent toughness	Low shrinkage, superior dimensional stability	High toughness and elasticity, resistant to impacts	UV and weather resistant for long-term outdoor use	Excellent performance under high temperatures	Strong, tough, and impact resistant
		Highly compatible and beginner-friendly	Highly compatible and easy to print	Smooth and glossy surface	Smooth and refined finish	Wide vibrant color selection	Textured surface finish, minimal layer lines	Water and weather resistant for outdoor use	Water and weather resistant for outdoor durability	Matte surface finish, minimal layer lines	Matte surface finish, minimal layer lines	Soft and freeze resistant, performs well in cold	Engineering-grade material, water and heat resistant	High strength and rigidity, abrasion resistant	Low warpage, excellent dimensional stability
		Wide vibrant color selection	Wide vibrant color selection	Wide vibrant color selection	Wide vibrant color selection	Highly compatible and easy to print	Minimal shrinkage, higher dimensional accuracy	Tough and impact-resistant for lasting durability	High toughness and impact strength	Low shrinkage, precise dimensional accuracy	Impact resistant and durable, suitable for industrial use	Water and oil resistant, secure seal	Tough and impact-resistant for reliable durability	Low shrinkage, precise dimensional accuracy	Water and heat resistant, fast printing capability
		Plant-based and biodegradable	Biodegradable and eco-friendly	Biodegradable and eco-friendly	Biodegradable and eco-friend	Biodegradable and eco-friendly	Highly compatible and easy to print	Highly compatible and easy to print	Highly compatible and easy to print	High compatibility, easy to print					

vs 2.2 - added PLA CF - 22 Jul 25