



Table 1:

0	Material test at reference conditions	Test Method			Acceptance values				NOTE							
		1	2	3	UOM ⁴	MEASUREMENT	min	MAX	P	C	M	E	T	V		
									5	6	7	8	9	10		
	General Data								<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	
1	Material status [standard limited distribution] Stato del materiale [standard distribuzione limitata]															1
2	Market availability [APAC EFTA EMEA EU ISRAEL IT MERCOSUR NAFTA UNIVERSAL US] Disponibilità di mercato [APAC EFTA EMEA EU ISRAEL IT MERCOSUR NAFTA UNIVERSAL US]															2
3	Features [Homopolymer] Caratteristica generale [omopolimero]															3
4	Uses [general purpose hazard toxic] Utilizzo [scopo generico pericoloso tossico]															4
5	Appearance [W - white B - black T - transparent] Aspetto [W - bianco naturale B - nero T - trasparente]															5
6	Forms [G - gaseous L - liquid P - pellets S - solid] Formato [G - gassoso L - liquido P - pellets S - solido]															6
7	Processing method [A - additive manufacturing J - injection molding S - subtractive manufacturing (CNC)] Utilizzo [A - lavorazione additiva J - stampaggio ad iniezione S - lavorazione sottrattiva (CNC)]															7
	Mechanical Data / Proprietà meccaniche / .¹¹								<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	
8	Roundness (deviation) Rotondità della sezione (deviazione percentuale)				%											8
9	Dimensional tolerance [mm] on Ø 1.75 Tolleranza dimensionale [mm] sul diametro Ø 1.75				[mm]											9
10	Dimensional tolerance [mm] on Ø 2.85 Tolleranza dimensionale [mm] sul diametro Ø 2.85				[mm]											10
11	Specific weight ¹² (density at 20 [°C]) Peso specifico (densità a 20 [°C])		ISO 1183B	13	[g/cm ³]	1.00	1.80									11
12	Tensile Modulus (Young's) ¹⁴ Modulo di Young		DIN/EN/ISO 527-2		[GPa]	0.00027	1.60000									12
13	Tensile stress (yield strength, 23 [°C], 50 [mm/m]) ¹⁵ Sforzo tensionale (50 [mm/m])		DIN/EN/ISO 527-2/50		[MPa]	0.2	50									13
14	Tensile elongation (ultimate / at break, 23 [°C], 50 [mm/m]) ¹⁶ Elongazione (a rottura, 23 [°C], 50 [mm/m])		DIN/EN/ISO 527-2		%	7	230									14
15	Tensile elongation (snervamento) Elongazione (a snervamento)															15
16	Flexural Modulus (23 [°C]) ¹⁷ Modulo di flessione		ISO 178		[GPa]	0.2	2.3									16
17	Flexural stress (yield strength) at 3.5% strain, 23 [°C]															17
18	at yield, 23 [°C]		ISO 178		[MPa]											18
19	125 [°C]															19
20	175 [°C]															20
21	275 [°C]															21
22	Compressive stress (yield strength), Compressione (yield strength), 23 [°C]		ISO 604		[MPa]											22
23	120 [°C]															23
24	Charpy impact strength, notched, 23 [°C] Prova ad impatto, metodo Charpy		PN-EN/ISO 179-1: 2004 / A1: 2006		[kJ/m ²]											24
25	Izod impact strength, notched, 23 [°C] Prova ad impatto, metodo di Izod		ISO 180/A		[kJ/m ²]											25
26	Izod impact strength, unnotched, 23 [°C]		ISO 180/U													26
27	Brinell hardness Durezza Brinell		PN-EN/ISO 2039-1		[HB]											27
28	Rockwell hardness Durezza Rockwell		PN-EN/ISO 2039-1		[R]											28
29	Shore A hardness, 23 [°C] Durezza Shore A, 23 [°C]		ASTM 2240			28	32									29

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30	Shore D hardness, 23 [°C] Durezza Shore D, 23 [°C]	ISO 868													30
31	Maximum load Massimo carico	PN-EN/ISO 2039-1			[N]										31
	Thermal data							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	31	
32	Melting point Temperatura di fusione	ISO 11357			[°C]	60									32
33	Softening point Temperatura di rammollimento	ISO 11357			[°C]	60									33
34	Efficient melting point for 3D printing (melting point equivalent, due to the amorphous nature of the material)														34
35	Glass transition (T _g) temperature, onset Temperatura di transizione vetrosa, inizio	ISO 11357			[°C]										35
36	midpoint punto medio	ISO 11357			[°C]										36
37	VICAT softening temperature (rate B50) Temperatura di rammollimento Vicat	ISO 306			[°C]										37
38	VICAT softening temperature (rate B120) Temperatura di rammollimento Vicat	ISO 306			[°C]										38
39	Heath deflection temperature (HDT) at 0.46 [MPa] Temperatura deflessione 0.46 [MPa]				[°C]										39
40	Coefficient of thermal expansion, along flow direction ¹⁹ , below T _g Coefficiente di dilatazione termica, lungo flusso, per valori inferiori a T _g														40
41	average, below T _g medio, per valori inferiori a T _g	ISO 11359			[ppm/°K]										41
42	along flow direction, above T _g lungo flusso, per valori superiori a T _g														42
43	average, above T _g medio, per valori superiori a T _g														43
44	Heat deflection (distortion) temperature (HDT), as moulded, 1.82 [MPa]	ISO 75-F			[°C]										44
45	annealed 200 [°C] / 4 [h], 1.82 [MPa]														45
46	Heat deflection (distortion) temperature (HDT), as moulded, 0.45 [MPa]	ASTM D648			[°C]	48	54								46
47	Heat deflection (distortion) temperature (HDT), as moulded, 1.82 [MPa]					43	47								47
48	Thermal conductivity, along flow Conducibilità termica, lungo flusso,	ISO 22007-4			[W/m ² K]										48
49	average valore medio														49
50	Relative thermal index, electrical Indice termico relativo, elettrico														50
51	mechanical without impact meccanico senza impatto	UL 746B			[°C]										51
52	mechanical with impact meccanico con impatto														52
53	suggested printing temperature temperatura consigliata estrusione				[°C]										53
54	filament printing speed velocità avanzamento estrusione				[mm/s]										54
55	suggested bed temperature temperatura consigliata piana				[°C]										55
56	Maximum temperature of short usage														56
57	Maximum permanent operating temperature														57
	Flow properties							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	57	
58	Melt viscosity at 400 [°C] Viscosità di fusione a 400 [°C]	ISO 11443			[Pa*s]										58



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59	Melt volume flow rate (MFR - Melt Mass Flow Rate) Rateo di flusso del volume fuso ²¹	ASTM D1238		22	[cm ³ /10 m]										59
60	Linear mold shrinkage, flow Accorciamento lineare fusione, flusso				% thickness 3.2 [mm]	2.0	3.0								60
61	Linear mold shrinkage, flow Accorciamento lineare fusione, flusso	ASTM D955		23	% thickness 0.126 [in]										61
62	Odor Odore														62
63	Solubility Solubilità														63
64	Water absorption by immersion, saturation, 23 [°C], 24 h Assorbimento di acqua per immersione, alla saturazione, 23 [°C], 24 h	ISO 62-1			%										64
65	saturation, 100 [°C] saturazione, 100 [°C]														65
66	Water absorption by immersion, saturation, 23 [°C], 24 h Assorbimento di acqua per immersione, alla saturazione, 23 [°C], 24 h	ASTM D570		24	%	0.040	0.900								66
	Maximum moisture content Massimo contenuto di umidità														66
67	Special composition [U - UV curable elastomeric I W - Wax support] Composizione speciale [U - elastomero UV indurente I W - supporto ceroso]									<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	67
	Electrical properties									<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	67
68	Dielectric strength, 2 [mm] thickness Isolamento dielettrico	IEC 60243-1			[kV/mm]										68
	Hazards									<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
69	Electrical hazards														69
70	Flammability hazard (class 3 [mm])	UL													70
71	Flammability hazard (class 6 [mm])	UL													71
	Optical properties									<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
72	Color [opaque translucent] Colorazione [opaco traslucente]														72
73	Light transmittance Trasmissione luce visibile				%										73
	Special usage properties²⁵ Caratteristiche di utilizzo critico²⁶									<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
74	MED					<input type="checkbox"/>									74
75	STERI					<input type="checkbox"/>									75
76	BIO					<input type="checkbox"/>									76
77	FOOD					<input type="checkbox"/>									77
78	GLASS					<input type="checkbox"/>									78
79	GUM					<input type="checkbox"/>									79
80	HARD					<input type="checkbox"/>									80
81	WEAR					<input type="checkbox"/>									81
82	ITE					<input type="checkbox"/>									82
83	TRIBO					<input type="checkbox"/>									83
84	HEAT					<input type="checkbox"/>									84
85	FIRE					<input type="checkbox"/>									85

- Standard Test Method (STM).
- STM reference.
- Citations for bibliographic references.
- Unit of measurement (UOM)
- P - Physical property / Proprieta' fisiche /.
- C - Electrical property / Proprieta' elettriche /.
- M - Mechanical property / Proprieta' meccaniche /.

8. E - Chemical property / *Proprietà chimiche* / .
9. T - Thermal property / *Proprietà termiche* / .
10. V - Miscellaneous property (optical, flux, special, etc.) / *Proprietà varie (ottiche, flusso, speciali, etc.)* / .
11. Mechanical properties are significantly affected by the sample preparation method: typical values are not to be construed as specifications / *Le proprietà meccaniche sono condizionate significativamente dal metodo di preparazione del materiale di prova: i valori tipici non devono essere considerati come specifiche* / .
12. Typical value for specific gravity.
13. Ref.: TBD [ISO-1183].
14. Modulus of elasticity, Young's modulus or the tensile modulus (material stiffness).
15. Material strength refers to the point on the engineering stress-strain curve (yield stress) beyond which the material experiences deformations that will not be completely reversed upon removal of the loading and as a result the member will have a permanent deflection (ref.: <http://www.engineersedge.com/strength_of_materials.htm>).
16. The ultimate strength refers to the point on the engineering stress-strain curve corresponding to the stress that produces fracture (ref.: <http://www.engineersedge.com/strength_of_materials.htm>).
Elongation at break (fracture strain): ratio between changed length and initial length after breakage of the test specimen. Capability of a material to resist changes of shape without crack formation. Determined by tensile testing in accordance with DIN/EN/ISO-527.
17. Flexural strength, also known as modulus of rupture, bend strength, or fracture strength.
Ref.: <https://en.wikipedia.org/wiki/Euler%E2%80%93Bernoulli_beam_theory>.
18. Ref.: TBD [ASTM C1161-02c(2008)e1], "Standard Test Method for Flexural Strength of Advanced Ceramics at Ambient Temperature", ASTM International, West Conshohocken, PA.
19. Along flow and across flow directions have different values for characteristic properties.
20. Ref.: TBD [ASTM-D648].
21. Melt Mass Flow Rate (MFR).
22. Ref.: TBD [ASTM-D1238].
23. Ref.: TBD [ASTM-D955].
24. Ref.: TBD [ASTM-D570].
25. Medical appliances: MED, sterile: STERI, biocompatibility: BIO, food packaging: FOOD, transparent: GLASS, elastomeric: GUM, impact resistant: HARD, wearable: WEAR, information telecommunication: ITE, tribo resistance: TRIBO, heat resistance: HEAT, fire retardant: FIRE.
26. Applicazioni medicali: MED, sterile: STERI, biocompatibilità: BIO, packaging alimentare: FOOD, trasparente: GLASS, elastomerico: GUM, resistenza ad impatto: HARD, indossabile: WEAR, telecomunicazione informatica: ITE, resistenza all'usura: TRIBO, resistenza alta temperatura: HEAT, autoestingente/non infiammabile: FIRE.