	Specification	618 Nylon
Notes:	**Technical**	
1	Manufacture Part ID	tau81/tau83
	HS Code	3916.9
	Thermal	
2	Printing Temperature	245C
	Melting Temperature	218C
3	Tg Glass transition	48C
4	Pyrolysis - Thermal degradation	335C
	Non-Destructive Evaluation	No
5	Print-Bed Temp	30-65C
6	Ambient Temp (Enclosure)	30 - 100C
	Physical	
	Nominal Diameter (3mm Maximum Dia)	1.75mm/2.85mm
	Weight /spool	1 lb
	Nominal Length/spool (In Feet)	490/180
7	Shrinkage - in/in	0.0074
8	Solvent/Glue	None
9	**Mechanical**	
	Tensile Stress "PSI" when 3D Printed	4,575
	Ultimate Elongation when 3D Printed	86.20%
	Modulus "PSI" when 3D Printed	22,190
	Optical	
	Opacity	91%
	Reflectivity	N/A
10	Color	Natural
	Approvals	
	FDA - Direct Food Contact	None
	FDA Direct Drink Contact	None
	UL Flammability	
	UL 94 HB	Yes
	UL 94 V2 at 3.2 mm thickness	Yes
	Features:	
	Surface texture	Excellent
11	Living Hinge	Very good
	Use of Taps for threads	Excellent
	CNC finish tooling	Any
12	CNC Coolant	Forced Air Only
	Use in 3D Forging	Excellent
	Printed Prosthesis	Excellent
	Robotic Assemblies	Excellent
	Jewelry Printing	N/A
	Fumes	None
	Lenticulated overlays.	N/A
	Dye type	Acid Based
	Dye Uptake (Saturation)	Excellent
	Specifications are subject to change.	

NOTE: Both Nylon and t-glase will NOT seize in your hotend even if left in place with heater "ON" for 72hr's. Both will oxidize and extrude soot upon reactivation.
150mm of purge is all that is required to begin printing anew.

Notes:

1. Manufacturer ID is self assigned and used for Production and shipping references
2. Based on an average of reported values. Nominally 5C lower with SeeMECNC and E3D HE's due to their structures
3. Note on t-glase…If the platform cools faster than the part, then a glass platform may suffer cracks. Tg on Nylon can be missleading due to nylon's structure
4. Pyrolysis is basically "Boiling"….Check your thermistor!
5. Print Bed temperature for nylons is a function of reducing the "shock" from layer to layer. Shock is defined as the time between layers such that the temp diff is at it's greatest.
6. Small parts in t-glase need a fan on the part being printed due to it's Tg
7. Moisture plays a strong part in shrinkage. Less moisture = less shrinkage.
8. To adhere nylon to nylon, use a soldering iron.
9. Testing performed by St Louis Testing Laboratories
   Unit = 5500R Instron with Bluehill Software….
   ASTM D412-0a E2
   5 pc's printed at rated temperature
   Bars are .1314" thk
   1 perimeter
   All surfaces (no fill, just surfaces)
   45 degree surfaces
10. As natural is not a specific color, we are working on a Pantone equivalent.
11. Living hinge is using the material flexible properties as a hinge assuming 2000 90 degree transitions.
12. As nylon will take on water, only air cooling should be used.